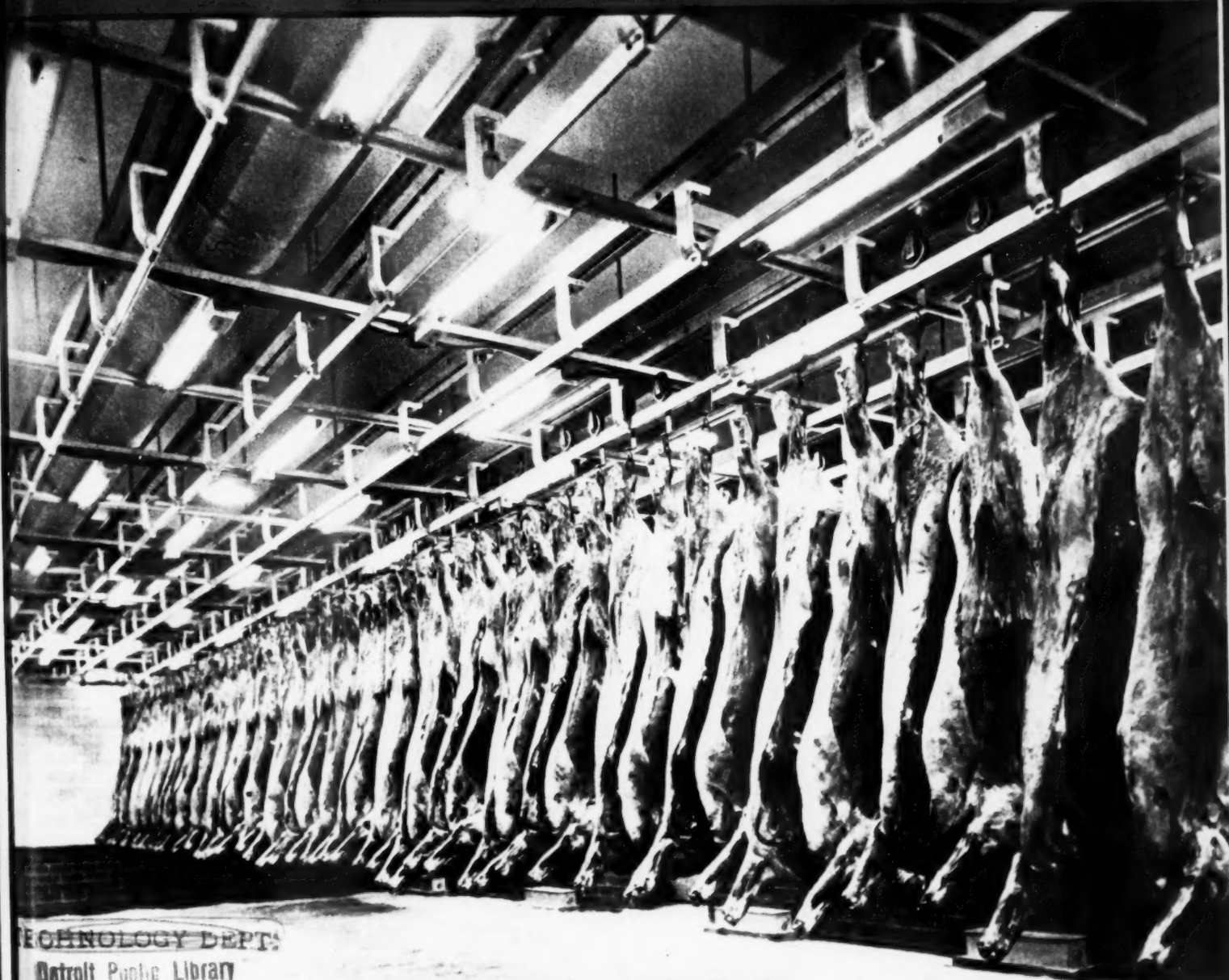
ELECTRICAL WHOLESALING

FORMERLY WHOLESALERS SALESMAN

THE NATIONAL MAGAZINE FOR SALESMEN OF ELECTRICAL PRODUCTS



TECHNOLOGY DEPT.
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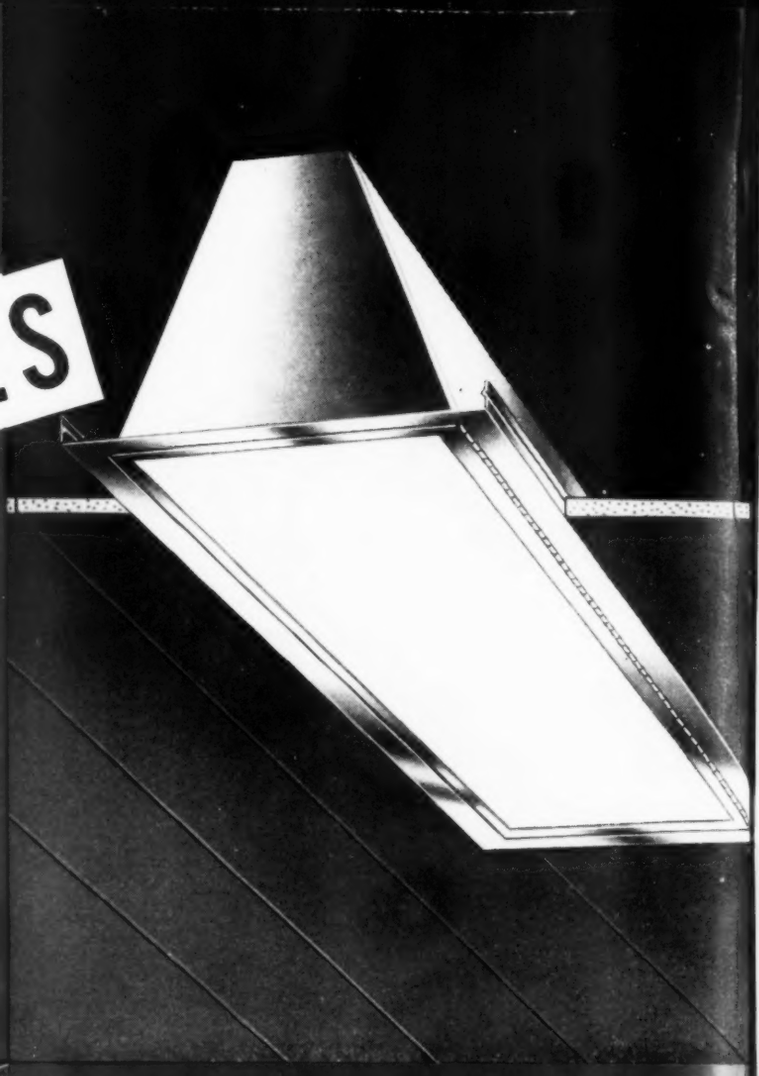
BUSINESS & FINANCE

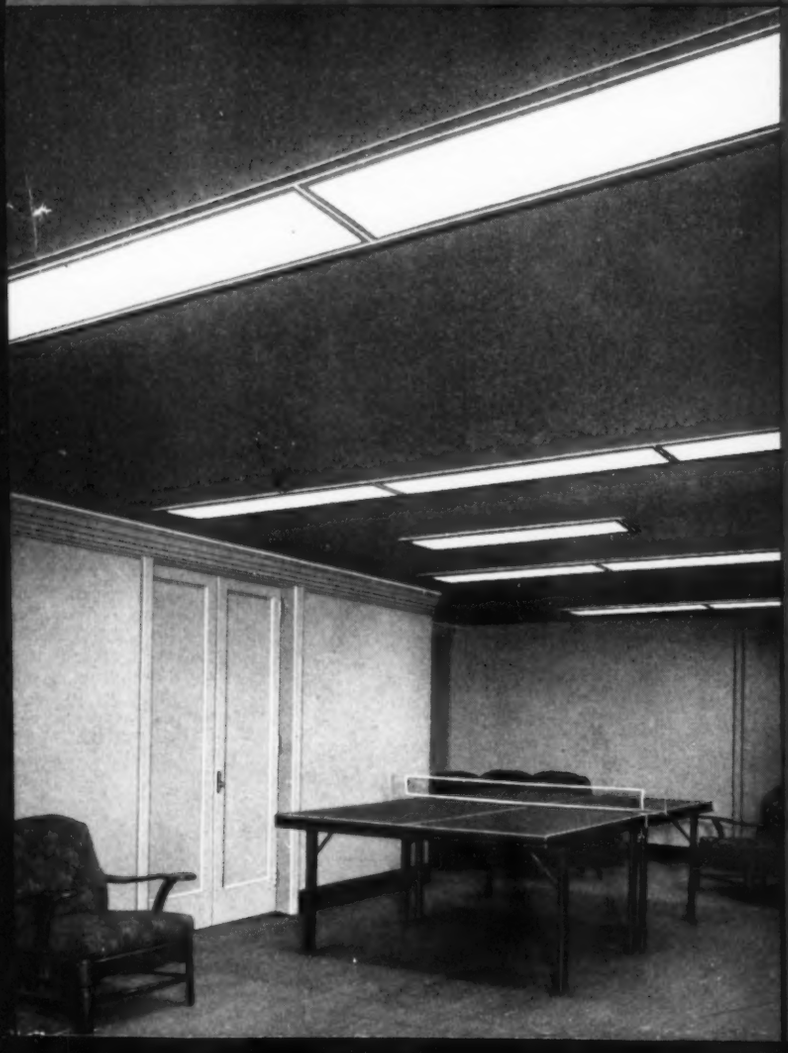
JULY • 1946

A 125,000,000 Units Market For Bactericidal Lamps

Leader TROFFERLITES

Give Better Lighting for Every Need!



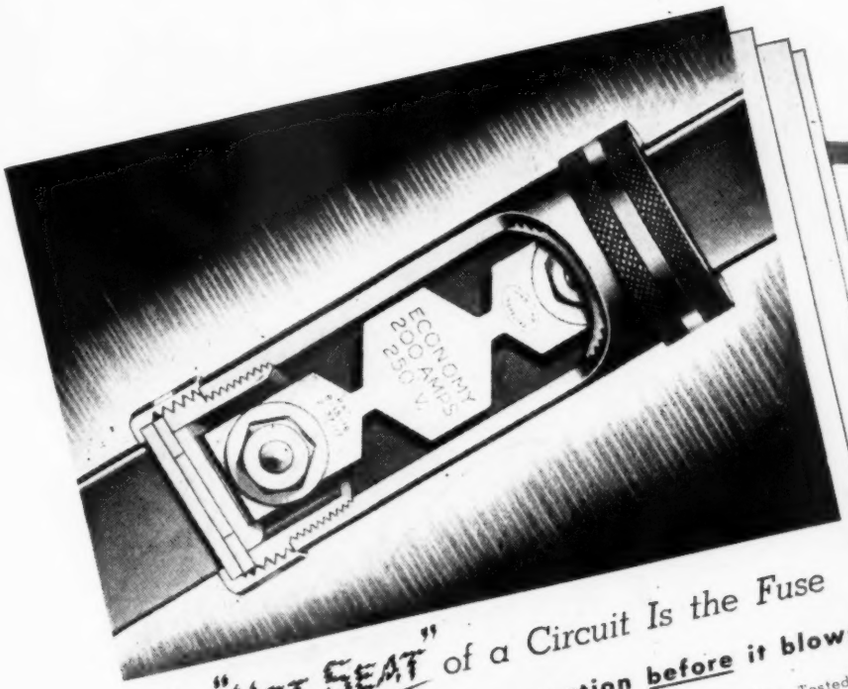


Yes, the standardized units in the Leader line of Recessed Troffer fluorescent lighting fixtures meet every troffer lighting need. They're ideal for new construction—perfect for a remodeling job. They're adaptable to use as single units or in continuous runs.

Leader Trofferlites are available both open and closed types; open, with or without louvers—closed, with glass-panelled, piano-hinged frames. Installation methods for Trofferlites are simple and practical, and cover every type of ceiling construction.

Whatever your lighting problem, you'll solve it better with Leader Trofferlites. They're distributed only by better electrical wholesalers. You'll find the Leader representative in your area helpful. Consult him *today*.

LEADER ELECTRIC MANUFACTURING CORP.
6127 NORTH BROADWAY • CHICAGO 40, ILL.
West Coast Factory—2040 Livingston St., Oakland 6, Calif.



The "HOT SEAT" of a Circuit Is the Fuse

It must give FULL LIMIT protection before it blows!

The fuse is the "hot seat" of a circuit, responsible for stopping the current "cold," when electrical equipment is menaced by shorts or overloads.

ECONOMY Fuses with "Drop Out" Renewal Links, give *full limit* protection before they blow—eliminating costly, needless current interruptions.

Pioneer in fuse invention and development, ECONOMY has constantly improved the quality, performance and the dependability of Time-Tested ECONOMY Fuses and "Drop Out" Renewal Links.

Protection with ECONOMY

Cartridge Type
0-600 Amperes—250 Volts
0-600 Amperes—600 Volts

Plug Type
0-30 Amperes—125 Volts

Time-Tested • Reliable • Safe

Protection WITH ECONOMY

ECONOMY Fuse and Mfg Co.

2717 N. Greenview Ave. Chicago, Illinois

ECONOMY Leadership is maintained by a constantly growing demand

• Above is a reduction of one of the Full Page Advertisements which is reaching over 200,000 men who specify or buy fuses.

• There's no *"hot seat"* for jobbers who stock Economy fuses, because they're catering to an established demand—a demand being pushed steadily higher by nation-wide advertisements like the one above, bringing Economy to the attention of more than 200,000 men who buy and specify fuses. For over 34 years leading wholesalers have found Economy's jobber policy eminently satisfactory. You, too, can forge ahead with Economy!

ECONOMY Fuse and Mfg Co.

2717 N. Greenview Ave. Chicago, Illinois

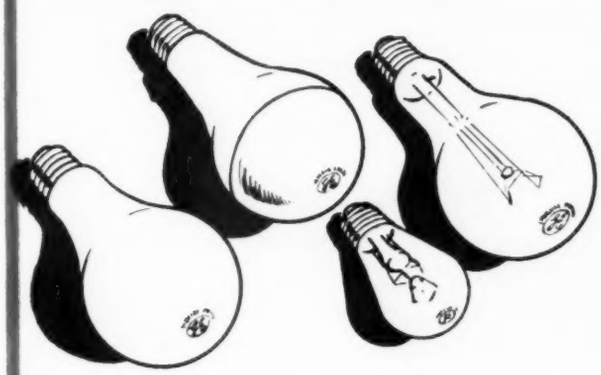
R v. 272 July – Dec. 1946

G-E's complete line includes everything in standard FLUORESCENT lamps from 14 to 100 watts, in white and colors. The G-E Slimline ranges from 42″ to 96″ in length, ¾ to 1 inch diameter; instant-starting, with single-pin base. G-E Circline will be made 8½″, 12″ and 16″ in diameter as conditions permit.

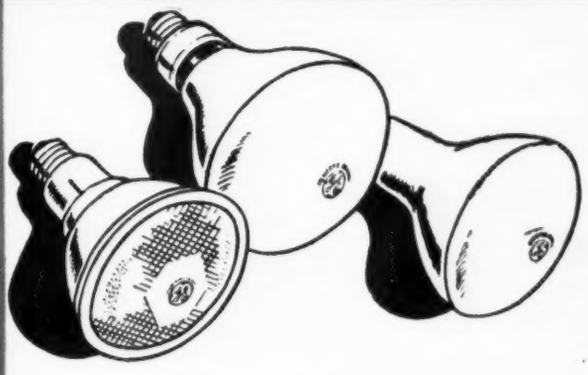
"High-efficiency" sums up the features of General Electric's *MERCURY* Lamps. Widely used for industrial lighting in high and medium-high bays, these arc-source lamps are made in 100, 250, 400, 1,000 and 3,000 watt sizes. The 1,000-watt (water-cooled) lamp finds many uses in searchlights, studios, photo-engraving.

Lamps your customers want...

MAKES 'EM ALL!



G-E Filament Lamps for general lighting jobs are made in sizes from 6 to 1500 watts; candelabra, intermediate, medium or mogul screw bases, or bi-post base in certain sizes. Standard lamps operate on 115, 120 and 125 volt circuits. Others made for 230 and 250 volt circuits and for low voltage farm service.



Concentrated beams and wide-spread floodlighting beams are available in G-E *REFLECTOR* and *PROJECTOR* lamps. Reflector Spot Lamps serve to high-light store displays; Reflector Flood for a spread beam in interiors. Projector Spot and Flood Lamps serve similarly in outdoor uses.

What types of lamps do your customers want? General Electric makes 'em all! When you deal with G-E, you know you are dealing with *one,* single source that makes every type of lamp. And you know your customers are assured of completely satisfactory performance. Sell the lamps backed by research... research that works constantly to make G-E Lamps ever better and to make them *Stay Brighter Longer.*

Notice the sound design and rugged construction of this Saflex Switch Unit

A good reason for choosing Saflex Distribution Panelboards

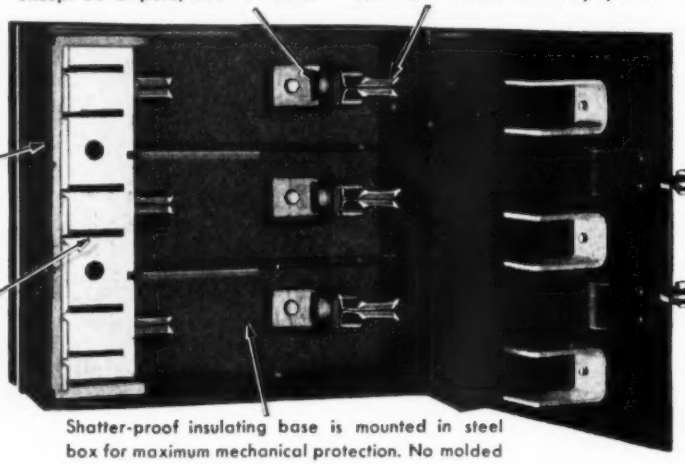
Solder-solderless lugs can be used either as solderless connectors or as solder lugs or both. Furnished on all except 30 ampere, 250 volt units.

Positive pressure fuse clips have high conductivity and assure automatic contact pressure at the fuse terminals without auxiliary parts.

Cam-action provided by handles near switch jaws where it is most needed. This cam-action supplies (with minimum manual effort) the considerable force necessary to provide high contact pressure.

Cover can be locked in either the ON or OFF position by means of a padlock on the bracket.

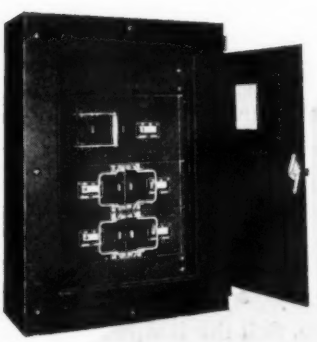
Arc suppressor block greatly increases the rupturing capacity.



Ranging from 30 to 600 amperes, Saflex Switch units are for use in systems up to 575 volts A.C. or 250 volts D.C.

Shatter-proof insulating base is mounted in steel box for maximum mechanical protection. No molded parts are exposed when cover is closed.

● Notice how simplicity, sturdiness, and safety are built into Saflex Switch units. Opening and closing unit doors operates switch units. Door is permanently anchored; it carries switch blade assembly only, and covers all live parts when closed. When door is open, all accessible live current-carrying parts are dead. All circuits may be opened safely under maximum load. All poles are broken simultaneously, preventing single-phasing. All units except 600 ampere size have rotary switch units. Yale locks on panel cabinet doors prevent unauthorized access. • For fast, simple installation, panel box has oversize wiring gutters and may be shipped separately for roughing in during early stages of construction. Interior and front are separate units, and may be installed later.



Write for Bulletin 2500. Address Square D Company, 6060 Rivard Street, Detroit 11, Michigan.

SQUARE D COMPANY

DETROIT • MILWAUKEE • LOS ANGELES

ELECTRICAL WHOLESALING

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CHANGE OF ADDRESS

Director of Circulation, Electrical Wholesaling
330 West 42nd Street, New York 18, N. Y.

Please change the address of my Electrical Wholesaling subscription.

Name .....

Old Address .....

New Address .....

New Company Connection .....

New Title or Position .....

CROUSE-HINDS

Flexible Fixture Hangers

easy to install — long life — low maintenance cost

The illustrations show a representative selection from the dozens of types and sizes of flexible lighting fixture hangers that are listed in Crouse-Hinds Condulet Catalog 2500.

No. 11
of a series of advertisements which demonstrate, that CROUSE-HINDS "complete line" means much more than just a range of sizes—there is a wide variety of highly specialized types in each classification.

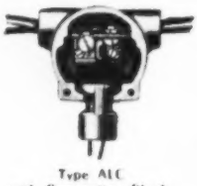
Type ALA Ball Hanger

Type ALT Ball

Type ALA Cushion Hanger

Type ALT Cushion

Type ALC Ball
Broken-away view


Type ALC
with Connection Block
Cover Removed

Type ALC Cushion

Type AHC Cushion
Vaportight

Type ALL Ball

Type GS Ball

Type ALL Cushion

Type GS Cushion

Type H Cushion

Type UNJ Ball

Type UNJ Ball

Type ARB Ball

Type ARB Cushion

Type OFH Cushion

Type OFH Cushion with
Clamp for Span Wire

Type UNJC Cushion

Type UNJC Cushion

Type UNC Cushion

Type COUP Locking
Coupling for locking
fixture stem to
Condulet hub

Type OSA

Type UNH Hook
Male

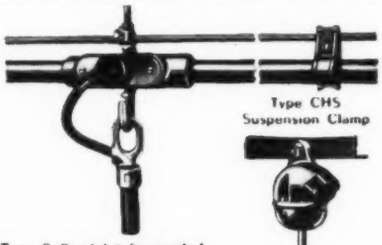
Type UNH Hook
Female

Type UNHC Cushion

Type UNL Loop
Male

Type UNL Loop
Female

Type FOH
for fluorescent
lighting fixtures


Type C Condulet Suspended
on a Span Wire with
Type OSA Suspension Hanger

Type C Condulet with
Fixture Hook and Loop

Type CHS Suspension
Clamp with Ring

Type ALC Ball
Fixture Hanger with
Lighting Fixture

Type CHS
Suspension Clamp

Type OFH Cushion
Fixture Hanger
Bolted to Structure
with Lighting Fixture

Type GS Ball
Fixture Hanger with
Type GSC Condulet
and Lighting Fixture

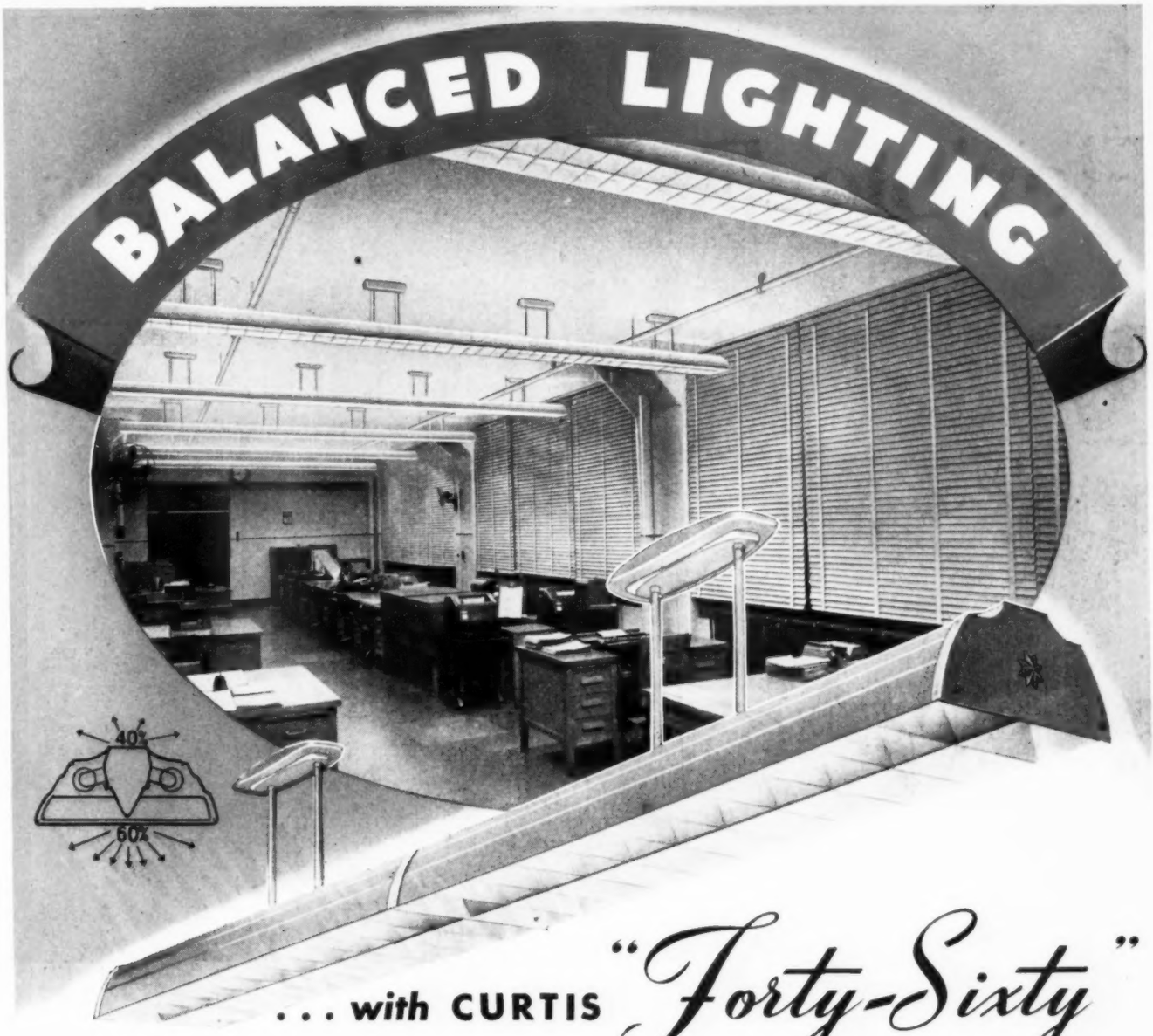
Type AHG Cushion
Fixture Hanger with
Type T Condulet and
Type VDA Lighting Fixture

A Nationwide Distribution Through Electrical Wholesalers

CROUSE-HINDS COMPANY
Syracuse 1, N. Y., U.S.A.

Offices Birmingham — Boston — Buffalo — Chicago — Cincinnati — Cleveland — Dallas — Denver — Detroit — Houston — Kansas City — Los Angeles — Milwaukee — Minneapolis — New York Philadelphia — Pittsburgh — San Francisco — Seattle — St. Louis — Washington *Resident Sales Engineers* Albany — Atlanta — Charlotte — Indianapolis — New Orleans
CROUSE-HINDS COMPANY OF CANADA, LTD. *Main Office and Plant* TORONTO, ONT.

CONDULETS · TRAFFIC SIGNALS · AIRPORT LIGHTING · FLOODLIGHTS



. . . with CURTIS "Forty-Sixty"

A TWO-LAMP FLUORESCENT UNIT FOR OFFICES, DRAFTING ROOMS AND FOR ANY JOB REQUIRING COMFORTABLE, EFFICIENT SEEING

The "Forty-Sixty" is specifically designed to provide better working conditions for the human eye. 40% of the light is directed to the ceiling and is diffused smoothly throughout the room. 60% is directed down to the working plane to provide ample light for quick and easy seeing. The balanced lighting frees the eye from strain and increases its efficiency. Fixture brightness has been held to rigid limits and scientific louvering shields the lamp at all ordinary angles of view.

The "Forty-Sixty" is an all-metal luminaire requiring a minimum of maintenance because there are no horizontal reflecting or diffusing surfaces to collect dust. Alzak Aluminum reflecting surfaces are easy to clean and reflect the light from the ceiling with a pleasingly luminous effect

These units are ideal for individual mounting or for use in continuous runs. If you do not already have data on Curtis "Forty-Sixty" write for it today

CURTIS Lighting INC.
6135 WEST 65th STREET
CHICAGO 38 • ILLINOIS

OLIVER Galvanizing

protects your "repeat" sales!

Your customers come back for "more of the same" as long as the products they buy give satisfactory service. For that reason, the expertly-applied protective galvanized coating on Oliver Pole Line Materials is of real interest to you. It protects not only the products, but your customer good-will as well!

This is typical of the many sound reasons why you can always sell Oliver Pole Line Materials with full confidence in the high quality of the products and dependable service they give. Your customers will always be glad to get "more of the same."

And don't forget that you are free to sell every item in the Oliver catalog to every buyer in your territory! The Oliver 100% Distributor policy means that we have no "withheld" customers, or "withheld" products. You get full benefits from all the contacts you make.

Makers of Pole Line Materials since 1895

OLIVER
IRON AND STEEL
CORPORATION

SOUTH TENTH
AND MURIEL STREETS
PITTSBURGH 3, PENNA.

SERVING YOU THROUGH SCIENCE

NEW CODE CHANGES SHOW PROGRESS IN BRANCH CIRCUIT WIRING

		R	RH	RW	RU	T (Formerly SN)	TW
Maximum Operating Temperature	1940	60 C	75 C	60 C	60 C	60 C	
	1946	60 C	75 C	60 C	60 C	60 C	60 C
Insulation Wall Thickness	1940	3/64"—#14, 12, 10 AWG 4/64"—#8—2 AWG 5/64"—#1—4/0 AWG	3/64"—#14, 12, 10 AWG 4/64"—#8—2 AWG 5/64"—#1—4/0 AWG	3/64"—#14, 12, 10 AWG 4/64"—#8—2 AWG 5/64"—#1—4/0 AWG	18 Mils (1.15/64) #14, 12, 10 AWG	2/64"—#14, 12, 10 AWG 3/64"—#8 AWG 4/64"—#6—2 AWG 5/64"—#1—4/0 AWG	
	1946	2/64"—#14, 12 AWG 3/64"—#10 AWG 4/64"—#8—2 AWG 5/64"—#1—4/0 AWG	2/64"—#14, 12 AWG 3/64"—#10 AWG 4/64"—#8—2 AWG 5/64"—#1—4/0 AWG	3/64"—#14, 12, 10 AWG 4/64"—#8—2 AWG 5/64"—#1—4/0 AWG	18 Mils (1.15/64) #14, 12, 10 AWG 25 Mils (1.6/64) #8, 6 AWG	2/64"—#14, 12, 10 AWG 3/64"—#8 AWG 4/64"—#6—2 AWG 5/64"—#1—4/0 AWG	2/64"—#14, 12, 10 AWG 3/64"—#8 AWG 4/64"—#6—2 AWG 5/64"—#1—4/0 AWG
Uses (Under National Electrical Code)	1940	General Use	General Use	General Use or in Wet Locations	Rewiring Only	Rewiring Only	
	1946	General Use	General Use	General Use or in Wet Locations	General Use May be used in Non-Metallic Sheathed Cable	#14—4/0 AWG General #14—2000 MCM Open Work	#14—4/0 AWG General #14—2000 MCM Open Work
Sizes (Under National Electrical Code)	1940	#14—2000 MCM	#14—2000 MCM	#14—2000 MCM	#14, 12, 10 AWG	#14—4/0 AWG	
	1946	#14—2000 MCM	#14—2000 MCM	#14—2000 MCM	Now Approved in Sizes #14—6 AWG	#14—4/0 AWG General #14—2000 MCM Open Work	#14—4/0 AWG General #14—2000 MCM Open Work

Current Carrying Capacity (In Amperes)

1940 Size	Conduit*	Open Wiring	R Size	Conduit*	Open Wiring	RH Size	Conduit*	Open Wiring	RW Size	Conduit*	Open Wiring	RU Size	Conduit*	Open Wiring	T (Formerly SN) Size	Conduit*	Open Wiring	TW Size	Conduit*	Open Wiring
14	15	20	14	22	29	14	15		14	18		14	18							
12	20	26	12	27	37	12	20		12	23		12	23							
10	25	35	10	37	50	10	25		10	31		10	31							
8	35	48	8	49	69	8	35					8	41							
6	45	65	6	65	94	6	45					6	54							
4	60	87	4	86	125	4	60					4	72							
2	80	118	2	115	170	2	80					2	96							

1946 Size	Conduit*	Open Wiring	R Size	Conduit*	Open Wiring	RH Size	Conduit*	Open Wiring	RW Size	Conduit*	Open Wiring	RU Size	Conduit*	Open Wiring	T (Formerly SN) Size	Conduit*	Open Wiring	TW Size	Conduit*	Open Wiring
14	15	20	14	15	20	14	15	20	14	15	20	14	15	20	14	15	20	14	15	20
12	20	25	12	20	25	12	20	25	12	20	25	12	20	25	12	20	25	12	20	25
10	30	40	10	30	40	10	30	40	10	30	40	10	30	40	10	30	40	10	30	40
8	40	55	8	45	65	8	40	55	8	40	55	8	40	55	8	40	55	8	40	55
6	55	80	6	65	95	6	55	80	6	55	80	6	55	80	6	55	80	6	55	80
4	70	105	4	85	125	4	70	105	4	70	105				4	70	105	4	70	105
2	95	140	2	115	170	2	95	140	2	95	140				2	95	140	2	95	140

*Not more than 3 conductors in conduit, raceway or cable. For more than three conductors in conduit, raceway or cable, reduce current carrying capacity in accordance with 1946 Code.

NOTE: According to Underwriters Laboratories; 1946 Code—R, RH and RW—may be labeled after April 1, 1946. Manufacturers need not produce until November 1. When production does start, Underwriters' labels must be applied and tags must be marked: "1946 Code."

1940 Code—R, RH, RW—may be labeled until November 1, 1946. Stocks in inventory after November 1 may be used until supply is exhausted.

Write for new wall hanger soon available. In meantime, use this chart

Laytex **(RU) is America's smallest diameter, lightest weight rubber insulated branch circuit wire. Laminated construction and perfectly centered conductors insure electrical safety.**

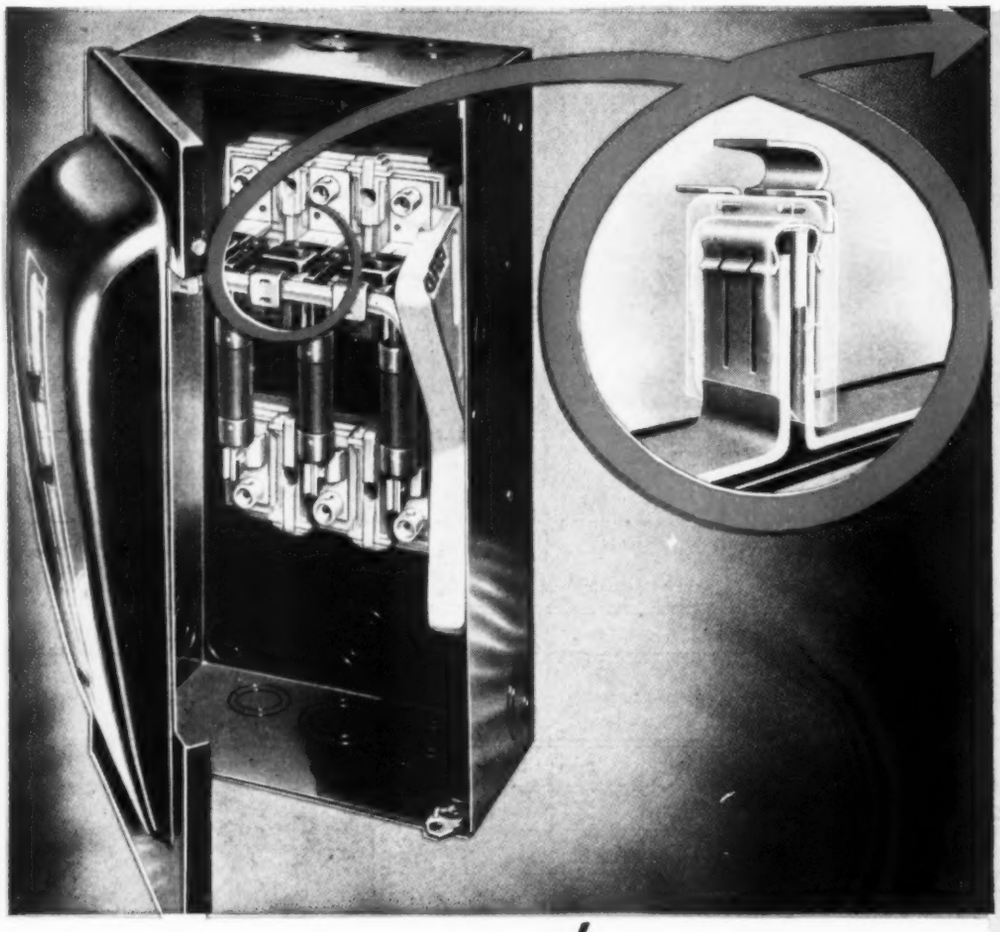
UNITED STATES RUBBER COMPANY

1230 AVENUE OF THE AMERICAS • ROCKEFELLER CENTER • NEW YORK 20, N. Y.

A BULLDOG MESSAGE FOR WHOLESALERS

This reproduction of a current industrial magazine advertisement contains valuable information for wholesalers and their salesmen

Less arcing...longer life...



WITH BULLDOG *Vacu-Break* SAFETY SWITCHES

SAFETY SWITCHES are the guardians of electric circuits. They keep power on the job. That's why you'll want to weigh the advantages of BullDog Vacu-Break Safety Switches—for today and for the years to come.

There are six plus values in Vacu-Break Safety Switches—six exclusive design features to make them ideal productive devices for trouble-free operation under heavy production schedules.

1. Less arcing and resultant longer life, because BullDog's formed "Bakelite Arcing Chambers" confine and suffocate arcs to prevent burning and pitting of contacts.
2. "Clampmatic" switch contacts, providing "clamp type pressure" when contacts are closed—quicker, easier release when the handle is thrown to the OFF position.
3. Quick action mechanism assures positive "ON and OFF" operation with a minimum number of wearing parts.
4. Ample wiring room is provided without sacrificing compactness.
5. Solderless wire grips.
6. Streamlined handle placed within the cabinet lines to allow front operation and closer banking of switches.

BullDog Vacu-Break Switches—first in quality and first in safety—keep power on the job to help you speed production and reduce maintenance costs. Get full information now—either by consulting a BullDog field engineer or by writing us for descriptive folders.

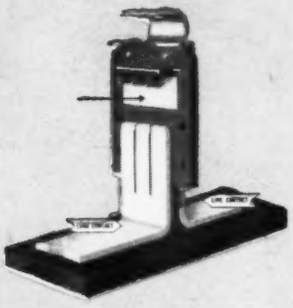
• • •

Manufacturers of SafToFuse Panelboards—Switchboards—Circuit Master Breakers—BUStribution DUCT for "plug-in" power—Universal Trol-E-Duct for flexible lighting—Industrial Trol-E-Duct for Portable Tools, Cranes and Hoists.

BULLDOG
ELECTRIC PRODUCTS COMPANY

DETROIT 32, MICHIGAN. IN CANADA: BULLDOG ELECTRIC PRODUCTS OF CANADA, LTD., TORONTO. FIELD OFFICES IN ALL PRINCIPAL CITIES

EXCLUSIVE *Vacu-Break* AND CLAMPMATIC CONTACT FEATURES



"CLAMPMATIC" SWITCH CONTACTS

With formed Bakelite cover removed, illustration shows moving contact confined within the slotted section of the arcing chamber, free to engage stationary contacts when switch is operated from "OFF" to "ON" position.

EASY MAKE AND BREAK

(Left) When operated to OFF position, clamping spring first releases its pressure to remove disconnecting resistance.

(Right) When operated to ON position, contact (slug) first engages stationary line and load contacts before clamping spring makes full pressure contact.

BOLT TIGHT CONNECTIONS

Moving contact (slug) is held tightly between line and load contacts by clamping pressure spring in full ON position.

LOOK AT 'EM *GO!*
with CONDUIT pipe products

Assure your contractor customers speedier assemblies on every job with properly gauged, carefully chamfered, perfectly reamed Conduit Pipe Products. And remember, they move off the shelf just as fast as they move on the job, so be sure your stocks are adequate.

Conduit

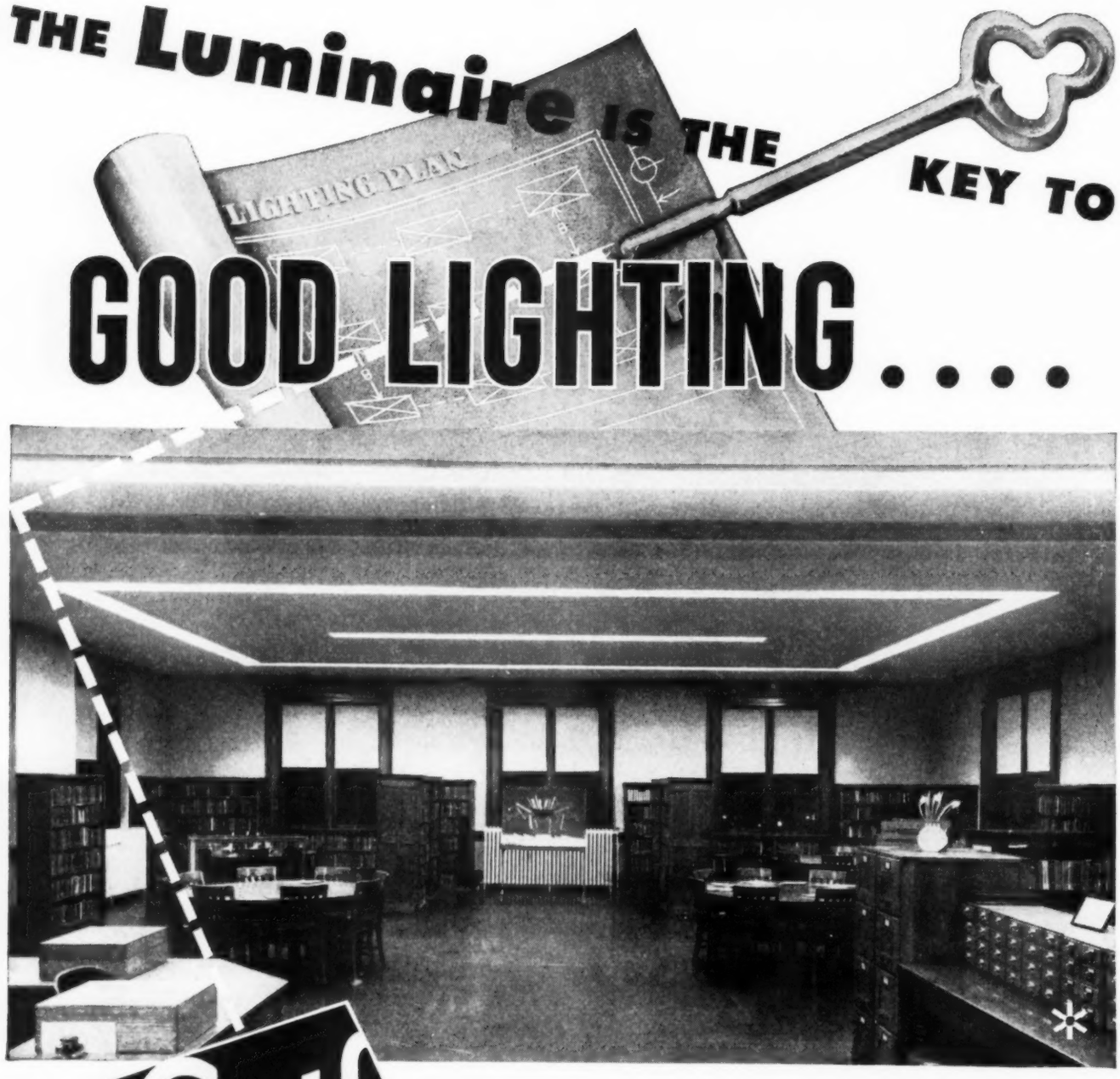
REPRESENTATIVES IN PRINCIPAL CITIES

PIPE PRODUCTS CO.

COLUMBUS, OHIO

PIPE COUPLINGS · PIPE NIPPLES · ELBOWS, 90° AND 45°
RUNNING THREAD PIPE · GOOSENECKS · WALLPLATES

THE Luminaire IS THE KEY TO GOOD LIGHTING....



Guth FLUORESCENT

THE "KEY" TO THE SPECIFIC LIGHTING JOB!

Whatever the lighting problem, whether in office, store, factory or institution, the "Key" to Good Lighting is the Luminaire, for it is the Luminaire that harnesses and controls the energy of the light sources to produce the desired results!

GUTH FLUORESCENT Luminaires are the "Key" to the *Specific* Lighting Job. The complete line of GUTH FLUORESCENTS is engineered to provide the quantity and quality of light you require for any specific installation. GUTH FLUORESCENTS offer "tested" quality, proven in actual application, dependable results, predictable by scientific ratings, and the newest Luminaire designs, pioneered by GUTH—Leaders in Lighting for 44 continuous years.

*DATA ON THIS PHOTO: GUTH RECESSED TROFFERS in this Public Library are providing 59 Foot Candles of quality illumination, mounted in 10' ceiling, and requiring only 3 watts per square foot.

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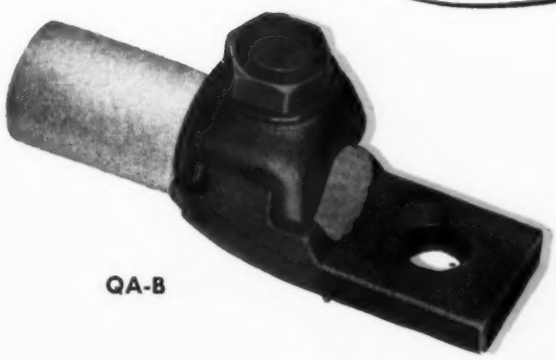
LEADERS IN LIGHTING SINCE 1902

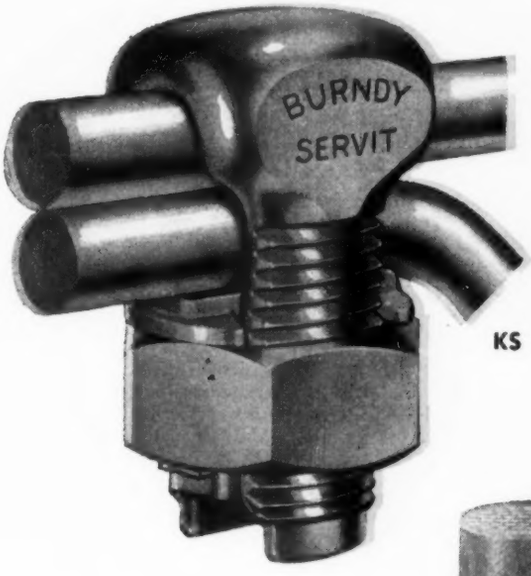
Connect with BURNDY

★ **Because** . . . Burndy not only provides the *broadest* line of electrical connectors but also provides the connectors that are in *broadest* demand. Skillfully designed by connector specialists . . . fully approved by Underwriters . . . and well advertised to your customers and prospects . . . Burndy stocks turn-over rapidly, with bigger profit for you. Ask for bulletin 41.



QA-B

QR-B



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BURNDY ENGINEERING CO., INC. **107-S BRUCKNER BLVD., NEW YORK 54, N. Y.**

FAST TURNOVER

with IDEAL WIRING DEVICES

IDEAL is constantly supplying you with products that are sure fire for fast turnover—in daily demand—what every electrician needs!

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This Advertising Supplemented by *200 Service Engineers* is characteristic of *IDEAL'S* quarter-century-old policy of wholehearted support for our wholesalers, who supply over 100 *Products* to more than *40,000 Customers*, located in every state and in Canada.

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Wiring Device Division

IDEAL INDUSTRIES, Inc.

(Successor to Ideal Commutator Dresser Co.)

1047 PARK AVENUE SYCAMORE, ILLINOIS

IDEAL WIRING DEVICES

(Pictured above)

1—IDEAL "WIRE-NUTS" (Solderless, Tapeless Wire Connectors) make wire joints the modern way—no solder, tape or heat, simply strip wires, screw on, that's all. Millions in use—approved by Underwriters' Laboratories, Inc.

2—IDEAL FISH-TAPE, REEL and PULLER. Three Tools in One. Eliminates expensive tape breakage. Safe—Tape cannot kink or spring around all over the floor—8 sizes.

3—IDEAL WIRE STRIPPERS—"E-Z" Hand Type (Stripper and Cutter)—a Handy Tool for stripping stranded or solid wire. 2 models—"Automatic" and "Standard". IDEAL has most complete line of hand, foot and electrically operated Wire Strippers on the market.

4—IDEAL B-X ARMOR CUTTER—*Snip*—and the B-X cable is cut with this handy pocket size tool. Cuts either two or three wire, No. 12 or No. 14 cable. Eliminates spoilage. Cuts cleanly—quickly—without injury to wire insulation. Steel cutting blade removable for sharpening.

Other IDEAL Wiring Devices

Fuse Reducers • "Test-Glo" • Test-Lite and Fuse Puller • "Safe-T-Grip" Fuse Puller • Lugs (solder and solderless) • Fuse Clip Clamps • Joist Boring Machine.

PROMPT DELIVERY

149y

Reflecting the Nation's Lighting Preference

• In every commercial, residential and industrial lighting installation General Day-Lite fluorescent lighting units are performing dependable and unfailing service.

They are playing the vital part of furnishing better light more economically and doing the job most efficiently

No wonder they're the first choice of the nation's leading electrical merchandisers who know unusual values and recognize the high standard of quality and efficiency built into every General Day-Lite unit.

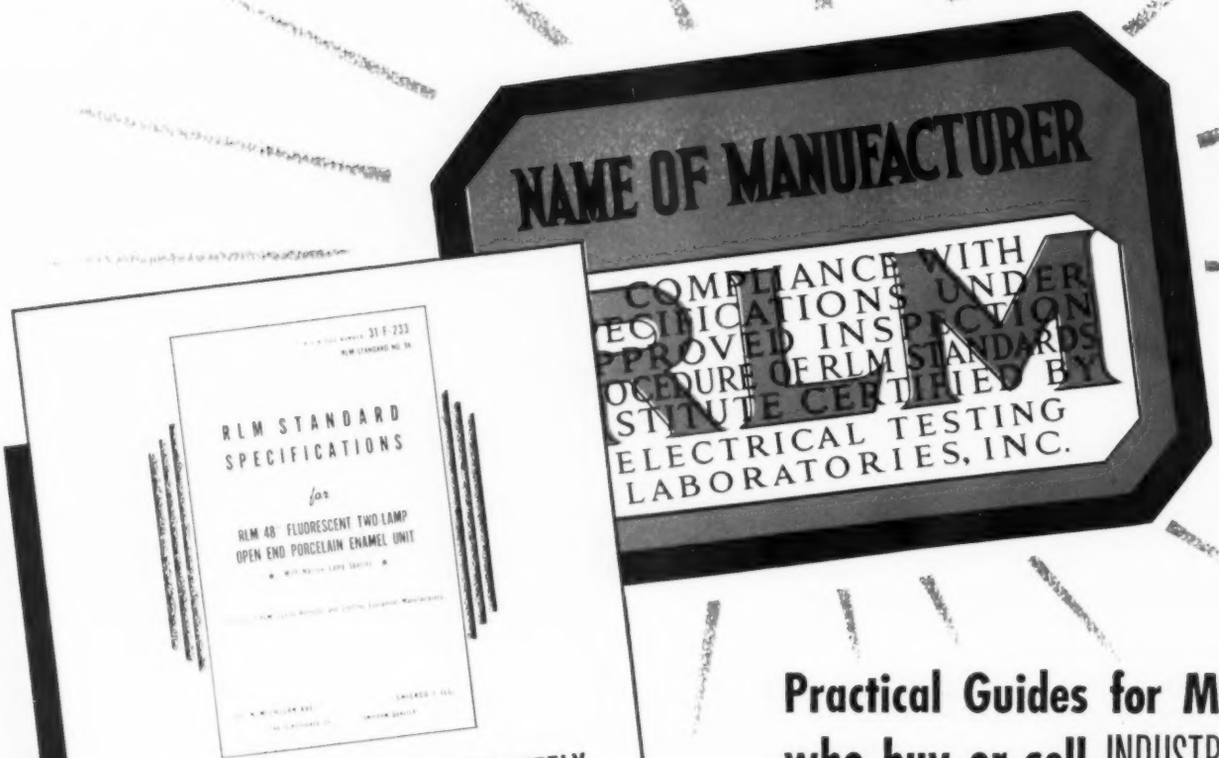
The ever-increasing demand for General Day-Lite fluorescent lighting units truly reflects the nation's lighting preference. It's your assurance of a profitable and dependable line.

GDL Co

NORRISTOWN, PA.
(Greater Philadelphia)

GENERAL DAY-LITE COMPANY

Manufacturers fluorescent lighting Fixtures



RLM SPECIFICATIONS COMPLETELY REVISED TO INCLUDE LATEST TECHNICAL DEVELOPMENTS

No.
100 Testing and Inspection Procedure
1 RLM Dome Reflectors
2 RLM Deep Bowl Reflectors
3 RLM Symmetrical Angle Reflectors
5 RLM 48" Fluorescent Two-lamp Closed end porcelain enamel unit
6 RLM 48" Fluorescent Three-lamp Closed end porcelain enamel unit
7 RLM 60" Fluorescent Two-lamp Closed end porcelain enamel unit
8 RLM 60" Fluorescent Two-lamp Closed end porcelain enamel diffuser unit
9 RLM 48" Fluorescent Two-lamp open end porcelain enamel unit
9A RLM 48" Flourescent Two-lamp open end porcelain enamel unit
10 RLM 48" Fluorescent Three-lamp open end porcelain enamel unit
11 RLM 60" Fluorescent Two-lamp open end porcelain enamel unit
12 RLM 60" Fluorescent Two-lamp open end porcelain enamel diffuser unit
18 RLM Glassteel Diffusers
22 RLM Fluorescent Two-lamp closed end porcelain enamel unit
23 RLM Fluorescent Two-lamp open end porcelain enamel unit

Practical Guides for Men who buy or sell INDUSTRIAL LIGHTING EQUIPMENT

When making plans for industrial lighting to take advantage of the latest developments in illumination engineering, play safe by specifying industrial lighting units built to conform to up-to-the-minute RLM specifications and identified by the RLM LABEL.

Every industrial lighting unit qualified to bear the RLM LABEL must conform to rigid RLM Official Standard Specifications that cover construction and performance factors vital to safety, lighting efficiency and economy. That is why it is so worthwhile to follow RLM Specifications in specifying, and to look for the RLM LABEL when buying Incandescent and Fluorescent industrial lighting equipment.

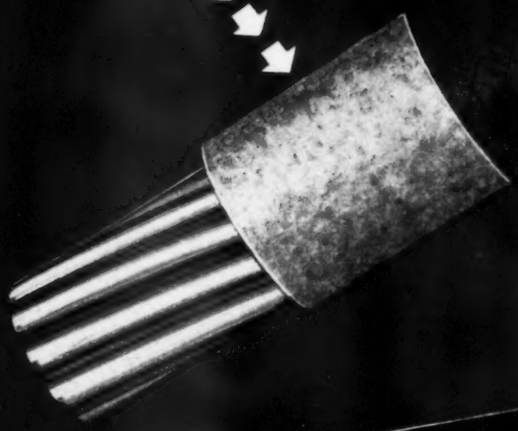
Copies of all the latest RLM Specifications, listed at left, may be secured through any manufacturer using RLM inspection and certification service, or direct from RLM Standards Institute.

The Letters RLM Stand for Reflector and Lighting Equipment Manufacturers

RLM STANDARDS INSTITUTE
INCORPORATED
307 N. MICHIGAN AVE. • SUITE 420 • CHICAGO 1, ILLINOIS

National Electric

ASBESTOS WIRE AND CABLE



Resists heat, moisture,

oil, grease, fumes . . .

2 TYPES

For All HOT-SPOT Locations

1. ALL-ASBESTOS

Sizes 18AWG to 1,000 MCM. 300 & 600-volt ratings. Max. operating temperatures: 200°C(392°F) and 125°C (257°F) respectively.

FOR wiring rheostats, electric ranges, electric water heaters, switchboards and electrical equipment exposed to heat or fire hazards, and general open wiring in hot locations.

2. ASBESTOS-VARNISHED CAMBRIC

Sizes 18AWG to 1,000 MCM. 600 to 8000-volt ratings. Max. operating temperatures: 110°C(230°F) for 600-volt wire to 91°C (196°F) for 8000-volt wire.

FOR power circuits and general hot-spot wiring in boiler rooms, power plants, steel mills, steam tunnels, etc.

Write for your copy of "NEasbestos Wire for Hot Spots."
Address: National Electric Products Corporation,
Box 897, Pittsburgh 30, Pa.

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National Electric Products Corp.

Pittsburgh, Pa.

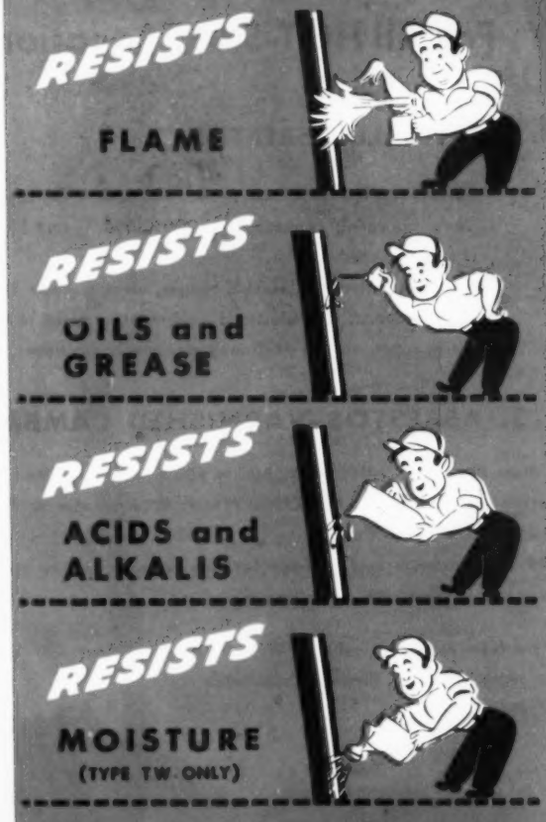
NATIONAL ELECTRIC PRODUCTS NE WIRING SYSTEMS

PARANITE PARASYN

TYPE T and TW BUILDING WIRE

For New Wiring—Rewiring—and Maintenance Wiring

Thermoplastic Insulation
Non-Braided



PARASYN thermoplastic small diameter building wire is ideal for new wiring, rewiring, and maintenance wiring. It is easy to pull in conduits, and strips fast and clean.

The thermoplastic insulation of both TYPES T and TW has long life, is high in dielectric and mechanical strength and is resistant to FLAME, OILS AND GREASE, ACIDS AND ALKALIS.

Black is standard, but also available in broad range of colors.

TYPE TW is especially recommended for wiring in wet locations.

Paranite Wire and Cable
Division of
ESSEX WIRE CORPORATION
General Sales Offices:
FORT WAYNE 6, INDIANA
Manufacturing Plants:
MARION, INDIANA • JONESBORO, INDIANA

If It's PARANITE It's Right!

Warehouses* and Sales Offices:
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*Chicago, Illinois
Cleveland, Ohio
Dallas, Texas
*Detroit, Michigan
*Kansas City, Missouri
Los Angeles, California
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Electrical Wires and Cables *"Better Than Code Requires"*

IT'S BACK ON THE MARKET

THE *Famous* G-E general-purpose AUTOMATIC TIME-SWITCH

FEATURES OF THE T-44

Long, accurate service with minimum maintenance is assured by the use of the Telechron motor.

The simple construction—the small number of parts—reduce service calls that eat into profits.

A sturdy, weatherproof case permits either indoor or outdoor installations and eliminates damage in normal handling.

Easily accessible terminals allow the switch to be installed with a minimum of time and effort.

For more information, check your regular supply house or write to Apparatus Department, General Electric Company, Schenectady 5, N. Y.

USE THIS TIME SWITCH FOR

- **Protective lighting of outdoor areas**
- **Show- and store-window lighting**
- **Electric signs, billboards, and spectaculars**
- **Street lighting**
- **Airport lighting**
- **Traffic control, alarm, and signal systems**
- **Poultry house lighting**
- **Domestic furnaces and water heaters**

GENERAL ELECTRIC

Your Favorite Brand
in a
BRAND NEW PACKAGE
OK
BRAND
FRICTION TAPE
APPLETON RUBBER CO., INC.
BOSTON, MASS.
No. 8
OK Brand FRICTION TAPE
OK Brand FRICTION TAPE
3/4 INCH
HIGH TENSILE STRENGTH
LASTING TACKINESS
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APPLETON RUBBER CO. INC.
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Sold exclusively through
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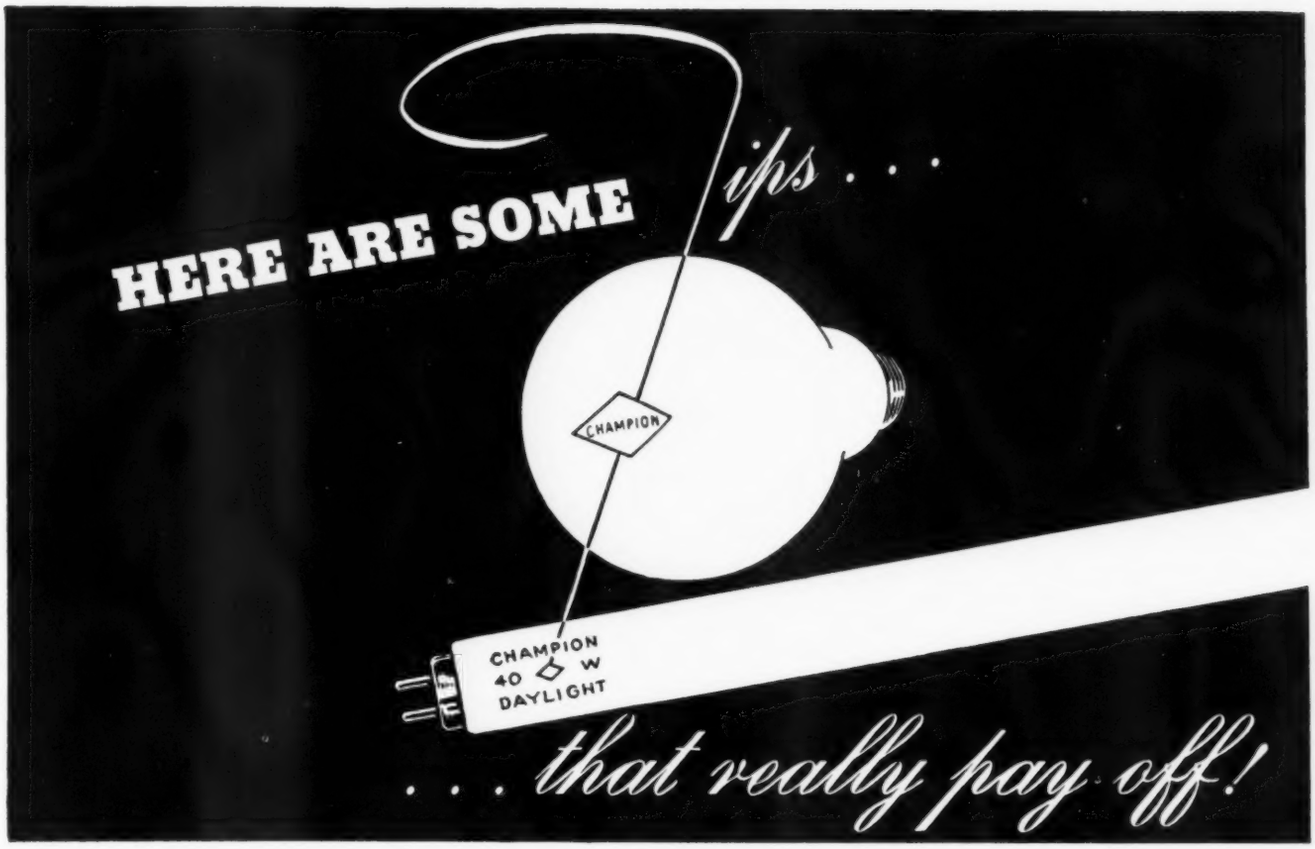


Sell CHAMPION **Fluorescent** and *Incandescent* Lamps bearing the familiar *diamond mark* of quality and you put yourself in a position to make the most of the big, steady, profitable volume in electric lamps. Every single one of your customers and prospects uses lamps and lots of them. Champion quality gets you the repeat business.

CHAMPION Lamps are easier to handle. No rules, regulations or red tape to hamper you from getting new and additional lamp business at lower han dling costs and additional dollar return.

You can do more lamp business and make more money selling Champion Lamps. Why not give us a chance to prove it?

CHAMPION LAMP WORKS

Lynn, Massachusetts

A DIVISION OF CONSOLIDATED ELECTRIC LAMP CO.

In the GUTTER

That's where this

T&B ENGINEERED

ingenious TEE-PARALLEL TAP really shines

SHOW YOUR CUSTOMER HOW THE HINJON JUNIOR TEE PARALLEL TAP MAKES GUTTER WORK EASIER*

SHOW him its compact, streamlined, one-piece construction that makes it so easy to install in any position, and to tape in all hard to get at places. Tight spots where it's more handy to turn a screw driver than operate a bulky wrench.

Show him how to slip the main into the powerful large self-adjusting jaws of this tough little bantam tap, and slip the branch into the smaller jaws. Tighten the one screw. That's all there is to it. Dare him to pull and haul on the branch and try to budge it loose! Nothing doing. Smile as you demonstrate how easily he can bend the branch to any desired position. Assure him there's nothing else like it on the market.

Continuing your sales story, mention casually that its pull-out test is more than double the Underwriters Laboratories' stiff requirements. State that the Hinjon Junior Tap is fully Approved. Each Hinjon Junior Tap takes a range of cable sizes: mains # 8 to 1,000,000 CM to branches #14 to #1. Any type of conductor your customer may be using.

To clinch the sale: Available now. Accent: "Available Now."

For sale only by T&B Electrical Wholesalers through whom all T&B products are distributed exclusively.

The Thomas & Betts Co.

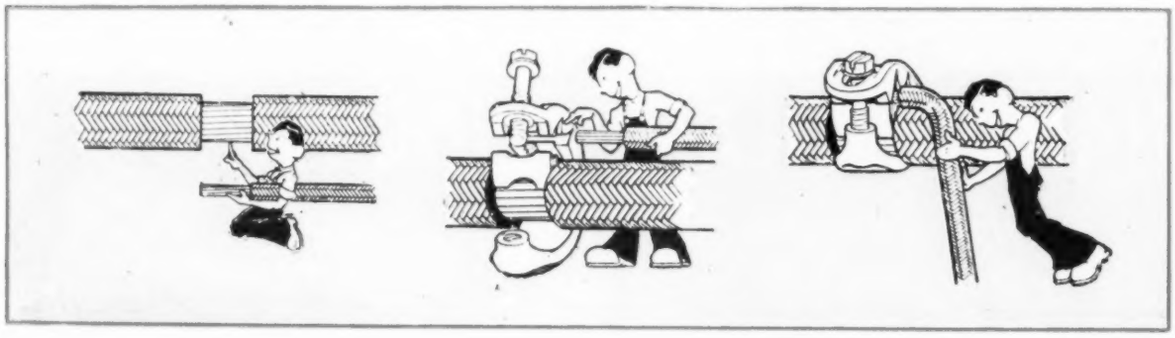
INCORPORATED

MANUFACTURERS OF ELECTRICAL FITTINGS SINCE 1898

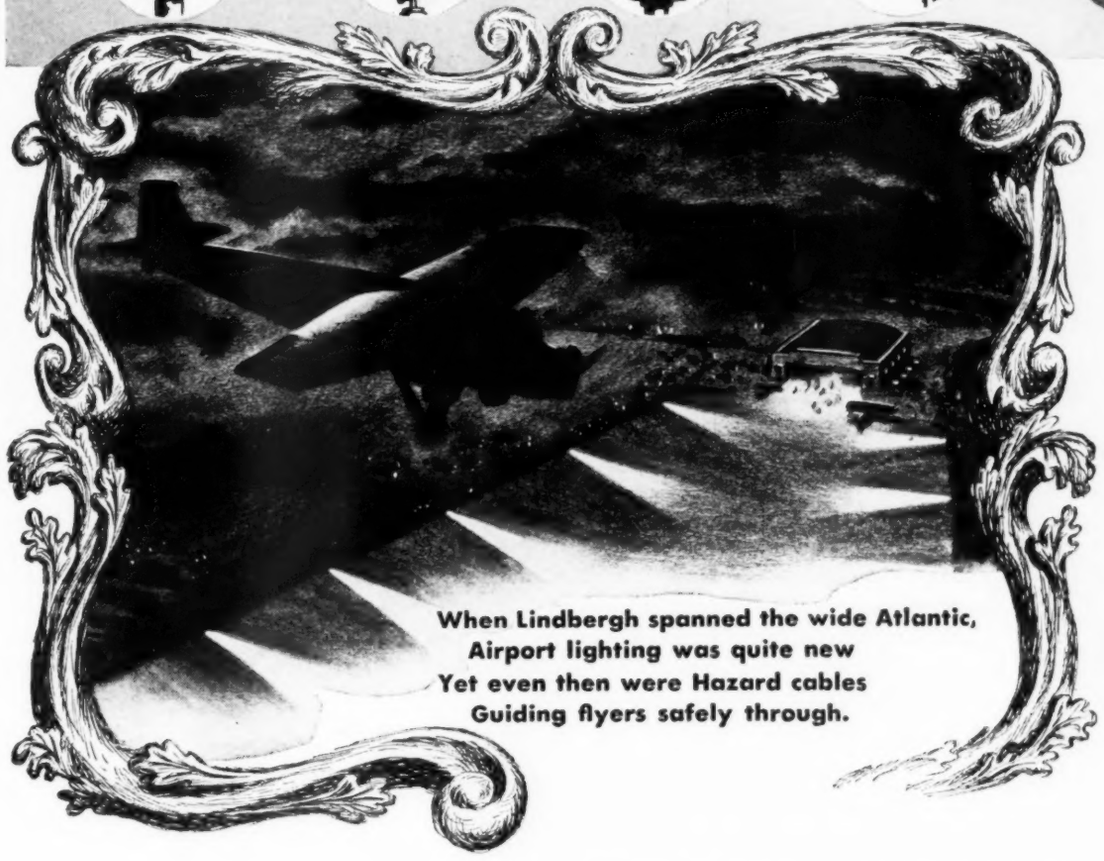
ELIZABETH 1, NEW JERSEY

In Canada: Thomas & Betts Ltd. Montreal

* Patented.



Hazard cables for airport lighting



When Lindbergh spanned the wide Atlantic,
Airport lighting was quite new
Yet even then were Hazard cables
Guiding flyers safely through.

Airport lighting has come a long way since those days when a safe hop across the Atlantic was news. Hazard Armortite Cables carried the power for many of these pioneer airport lighting systems, and unaffected by the rigors of the past twenty years, some of these same cables are still carrying the load in their original installations.

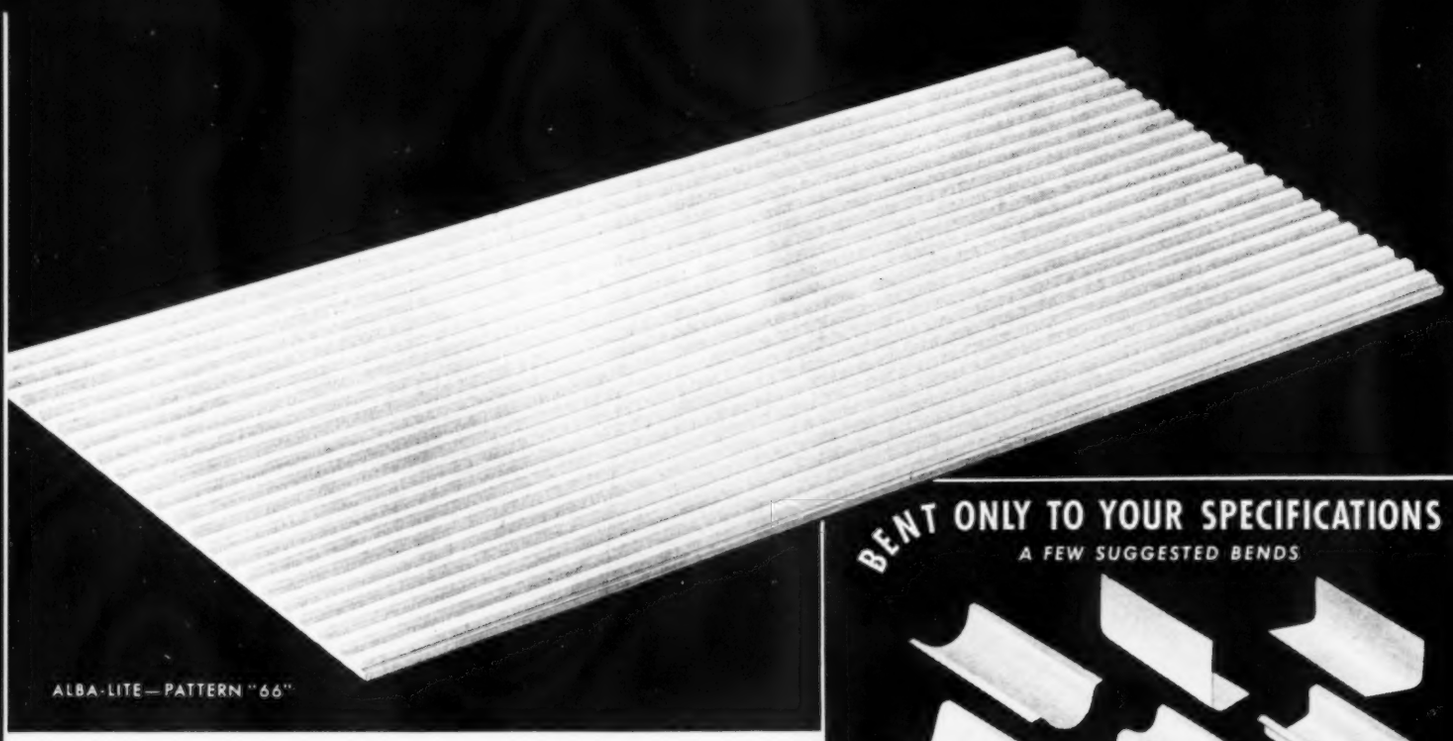
With the scientific progress made in Hazard cable design, Armortite is a still better cable for airport lighting today. It's light in weight, easy to install, splice and tap. And you can select it with complete confidence because of its record for dependable, trouble-free service for years and years. Hazard Insulated Wire Works, Division of The Okonite Company, Wilkes-Barre, Pa.

HAZARD ARMORTITE CABLE...armored, moisture-proof, may be buried directly underground without conduit. The non-corrosive Hazard submarine insulation is protected by plastic sealing compound, asphalted jute, and non-metallic tape armor. This construction withstands temperature changes of 130 degrees, soil acids, alkalies, mechanical damage, etc. As no lead sheath or steel armor is required, Hazard Armortite is light-weight, easy to install and moderate in cost. Send for Bulletin 115.

HAZARD

insulated wires and cables for every electrical use

4649



ALBA-LITE...

CORNING'S COMPLETELY NEW LIGHTING GLASSWARE GAINS ENTHUSIASTIC APPROVAL!

The recent introduction of Corning's new ALBA-LITE lightingware has resulted in immediate acceptance. It has proved to be the ideal answer for fixture manufacturers to the needs of modern fluorescent lighting.

ALBA-LITE FEATURES

ALBA-LITE is the new rolled sheet form of alba glass developed by Corning. Light diffusion is attained through the special composition of the glass rather than through surface treatment. The result is a smooth, easy-to-clean surface and permanent, uniform color.

ALBA-LITE is now available from stock in four commercial patterns.

ALBA-LITE opens up numerous design possibilities and adds beauty and luster to any lighting assembly...supplied flat or bent to your specifications with or without flanges... light in weight—in $\frac{1}{8}$" or $\frac{7}{32}$" nominal thickness.

ALBA-LITE is a translucent glass with high light transmission and low light absorption.

Send for free sample of

ALBA-LITE

Send your request on your company letterhead.

Lighting Sales Dept., WS-7

CORNING GLASS WORKS
CORNING, N. Y.

"CORNING" is a registered trade-mark and indicates manufacture by Corning Glass Works, Corning, N. Y

CORNING *means* research in Glass

Corning Engineered Lightingware
BRAND

Who, Me?

Sure, I use Central Rigid Steel Conduit—It's clean, easy to work with, and always of the same high quality.

"There's Tested Strength in Every Length"

CENTRAL
RIGID STEEL
CONDUIT

SPANG-CHALFANT

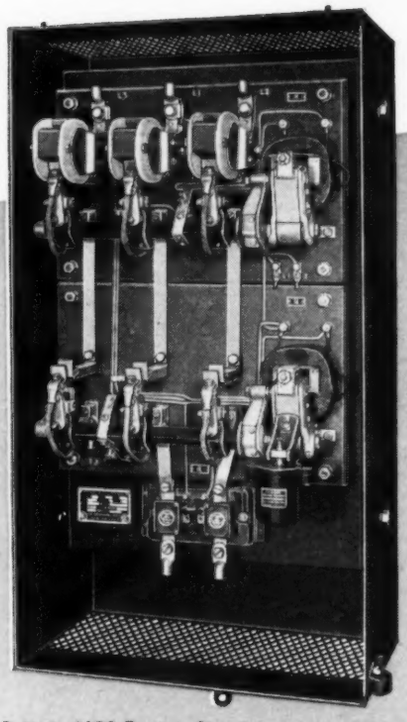
Division of The National Supply Company

General Sales Office: Grant Building, Pittsburgh 30, Pa.

District Offices and Sales Representatives in Principal Cities

"3C" Bulletin 6080 A. C. MAGNETIC STARTERS

For Dependable Low-Voltage Starting of Squirrel Cage Induction Motors

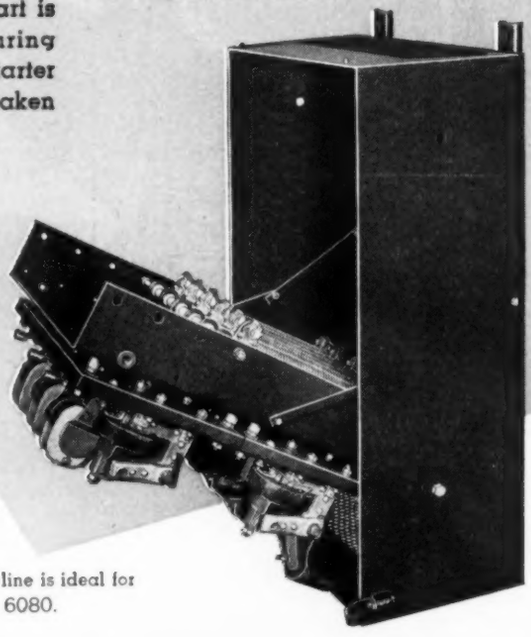


Bulletin 6080 Starter, Size 4
Front Cover Removed
Showing Swing Out Feature which provides ease of inspection of resistors.

For application on drives where **mechanical limitations** require reduced torque on starting, **or where power restrictions** limit amount of starting **current,** "3C" Bulletin 6080 Primary Resistor type A.C. **Magnetic Starters are** recommended. Constantly increasing **torque is developed** by the motor as it comes up to speed—**a smooth start is** produced since motor circuit is not **interrupted during** transfer from reduced to full voltage. **Moreover, this starter** does not reduce power factor at **which power is taken** from line during starting period.

Features of this starter include:

- **Reduced voltage starting.**
- **Edgewound accelerating resistors.**
- **Definite time acceleration.**
- **Motor overload protection.**
- **Copper-to-copper contacts.**
- **Rolling and wiping action on opening and closing keeps contacts clean.**
- **Arcs quickly extinguished by blowouts.**
- **Swing out feature for wall mounting sizes.**
- **Mechanical and electrical interlocks on reversing types.**

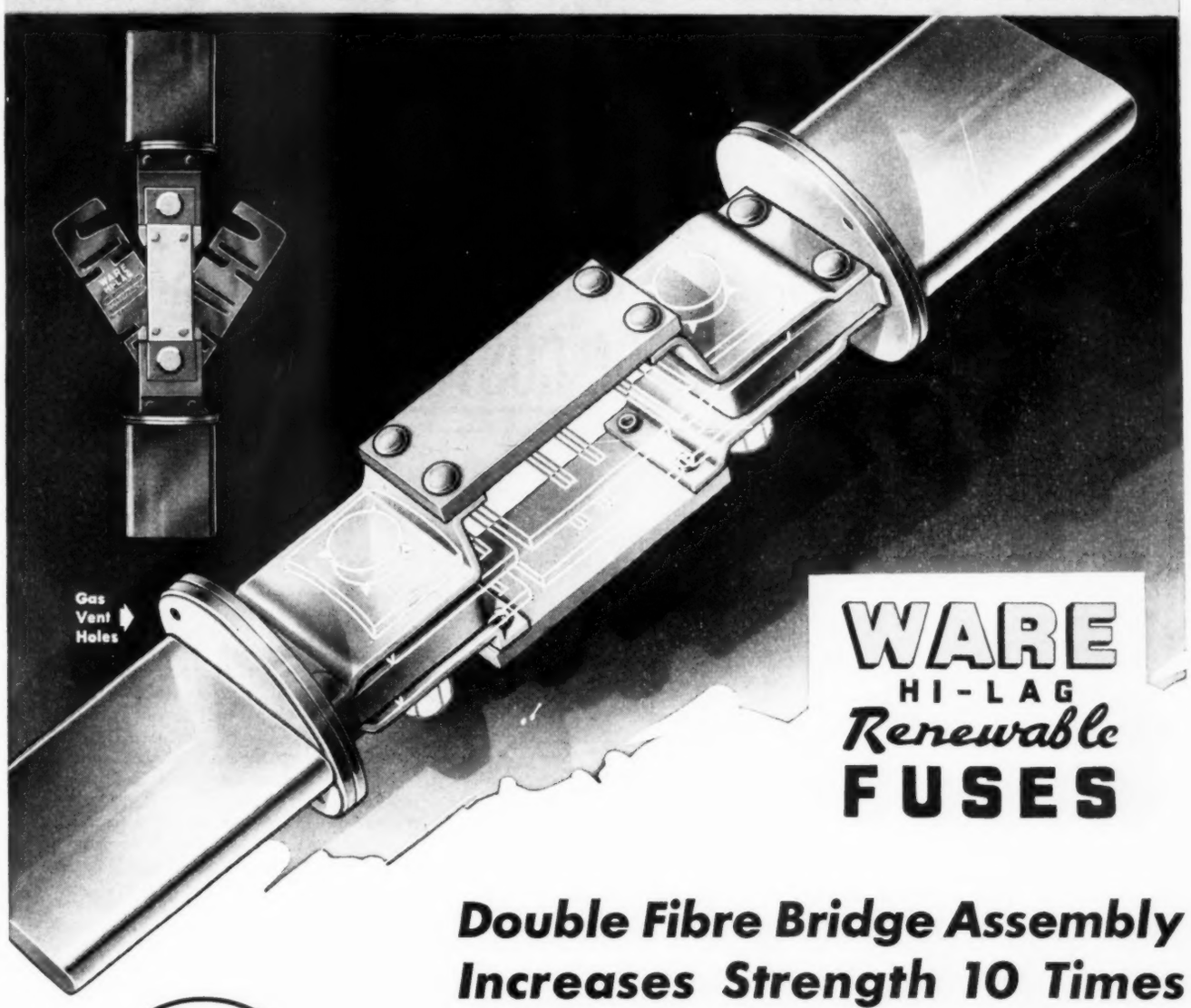


The "3C" Bulletin 6080 Starter is another reason why the "3C" line is ideal for distributors to handle. Write for fully descriptive Bulletin 6080.

THE CLARK CONTROLLER CO.

1146 EAST 152nd ST., CLEVELAND 10, OHIO • EVERYTHING UNDER CONTROL

LOOK TO THE FUSE LEADER FOR PRODUCTION PROGRESS



WARE
HI-LAG
Renewable
FUSES

Double Fibre Bridge Assembly Increases Strength 10 Times

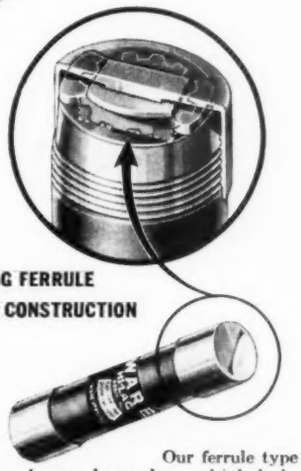
WARE HI-LAG Fuses have the strongest, most rigid knife blade assembly ever designed in fuses. The two heavy fibre bridges are supported by sturdy brass brackets which add greatly to the strength of the assembly. These bridge supporting brackets are attached to the copper knife blades and contact the entire end of links so that current flows through the brackets as well as the blades over a large area. Another reason for WARE HI-LAG Fuse's cool operation.

Perfect alignment is always maintained in this knife blade assembly with links centered in casing. The links are quickly and easily replaced or removed by loosening the nuts and slipping in or out.

Start using WARE HI-LAG Fuses today! Make them Standard Equipment for greatest economy and satisfaction. Investigate *now!*

Write for Brochure giving details of all the COOL FACTS, sizes and prices

APPROVED BY UNDERWRITERS' LABORATORIES



HI-LAG FERRULE FUSE CONSTRUCTION

Our ferrule type fuse has a heavy brass bar, which locks into open end ferrule, bridging fuse case. This bridge locks link to prevent twisting and cap tightens on new center contact. No sagging washers or twisted links to cause overheating.

WARE Brothers 4450 W. LAKE ST.·· CHICAGO 24, ILL.

ADVERTISEMENT

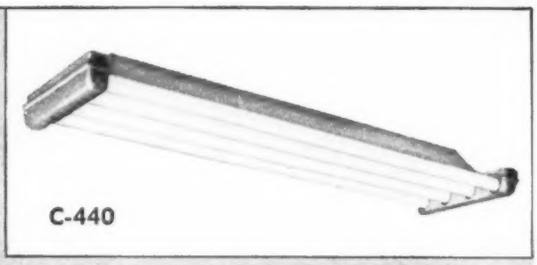
SYLVANIA NEWS

WHOLESALER EDITION

JULY *Prepared by* SYLVANIA ELECTRIC PRODUCTS INC., Salem, Mass. 1946

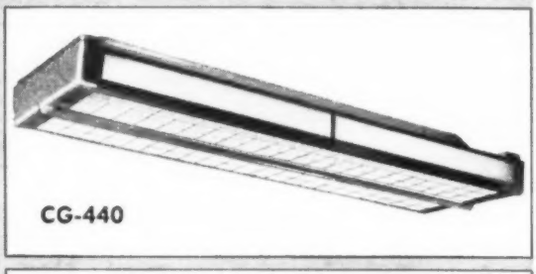
NOW! ONE BASIC CHASSIS DESIGN MAKES POSSIBLE WHOLE LINE OF CUSTOM-TYPE FIXTURES

Equipped with four 40-watt fluorescent lamps, this basic design fixture is used where shielding is not essential.



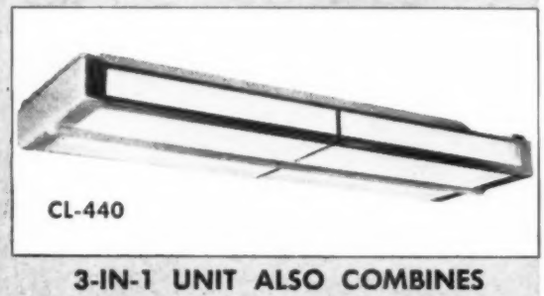
C-440

This is the CG-440 equipped with attractive glass diffusing panel. Its modern styling satisfies the requirements of the most exclusive shops.



CG-440

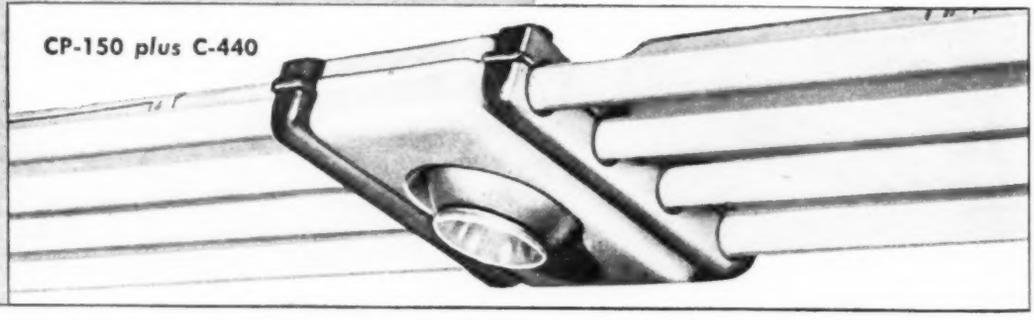
Of the same "design family" as the two above, this four 40-watt lamp fixture fitted with louvers is used in places such as schools, offices, drafting rooms.



CL-440

3-IN-1 UNIT ALSO COMBINES WITH NEW SPOT LIGHT

For stores, window display, lobbies, the CP-150 adjustable incandescent spotlight is centered between two C-440 basic-design fluorescent fixtures. Provides overall lighting *plus* accent lighting.



CP-150 *plus* C-440

Illustrations Show Three Different Models Made From One

Sylvania engineering has developed basic designs for commercial fluorescent fixtures, along with four different mounting methods. These advancements offer the trade a wide choice of installations—aimed to meet *any* lighting problem.

Illustrated on the left is basic-design model C-440. This fixture fitted with four 40-watt unshielded lamps answers the lighting needs of smaller stores, for instance. This *same* fixture fitted with attractive glass diffusing panel has the beauty and drama of modern design essential to the most exclusive shops. Similarly, it can be provided with lamp-shielding louvers, making it the ideal fixture where less diffused light is needed.

Every fixture can be joined with like fixtures to form continuous rows of lighting—ceiling or pendant mounted. *Not a single nut or screw need be removed to change lamps or starters on any fixture.*

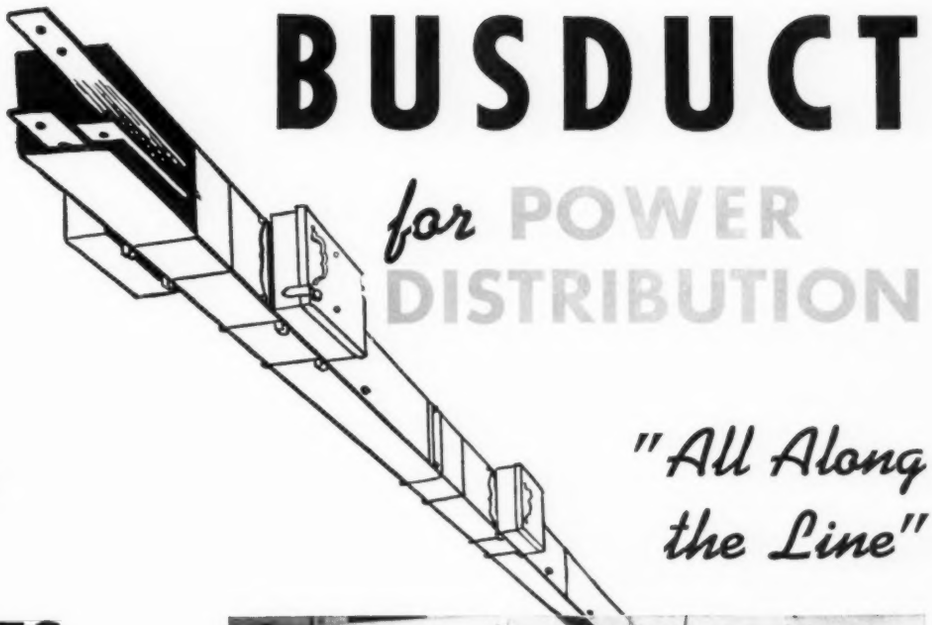
There are eleven basic commercial fluorescent fixtures available. Each is a self-contained package of light — ready to install!

Distributors, for more details, write Sylvania Electric Products Inc., Salem, Mass.

SYLVANIA ELECTRIC

MAKERS OF FLUORESCENT LAMPS, FIXTURES, WIRING DEVICES; ELECTRIC LIGHT BULBS; RADIO TUBES; CATHODE RAY TUBES; ELECTRONIC DEVICES

Plugin BUSDUCT for POWER DISTRIBUTION

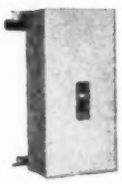


"All Along the Line"

FA TRADE MARK

Plugin UNITS

All FA Plugin Units, attractively finished in pearl grey enamel, are ready to plug into any one of the standard outlets of FA Busduct . . . and can be mounted on either or both sides of the Busduct section. Their sturdy galvanized sheet steel enclosures and their rugged compression-type bus bar connectors add to the life and service of your FA Busduct electrical system.



CIRCUIT BREAKER

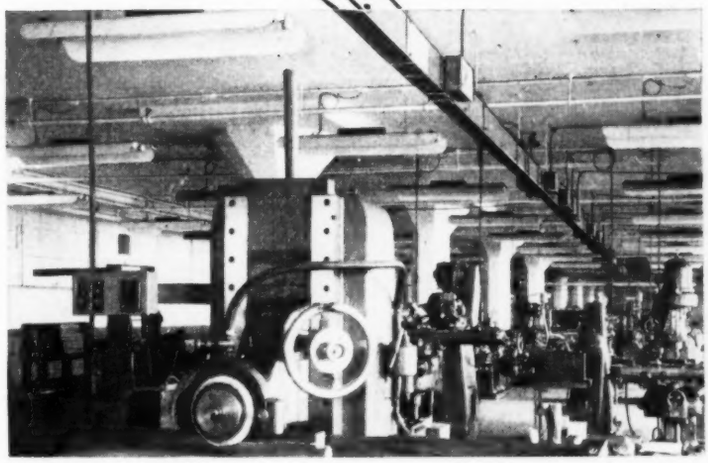
This Plugin Unit provides automatic thermal protection for circuits and equipment. Capacities: 15-225 amps., 250 and 575 volts.

SHUTLBRAK

A quick make-and-break, heavy-duty operating switch . . . excellent for frequent operation. Capacities: 30-200 amps., 250 and 575 volts.

KLAMPSWITCHFUZ

Excellent for disconnect service . . . the hinged-type pull out door contains *both* switch and fuse in one unit. Capacities: 30-200 amps., 250 and 575 volts.



If you are looking for an efficient yet economical way to increase the productive capacity of your plant, then consider FA BUSDUCT — the modern method of power and light distribution.

Combining high efficiency with greatly increased flexibility and economy, FA PLUGIN BUSDUCT makes power available *where* and *when* you need it. It reduces to a minimum the costly delays of moving and relocating machinery, and eliminates long expensive lead-ins with a consequent fluctuation in voltage.

FA PLUGIN BUSDUCT provides all the capacity needed for large and small machinery. Made in standard 10-foot sections with multiple outlets for either Circuit Breaker, Shutlbrak or Klampswitchfuz Plugin Units, FA PLUGIN BUSDUCT is easy to install and economical to operate. Designed for 2, 3 and 4 wire systems, 250-1000 amp. capacities for 575 volts AC or less.

For full details consult your nearest FA representative.

Frank Adam Electric Co.

ST. LOUIS, MISSOURI

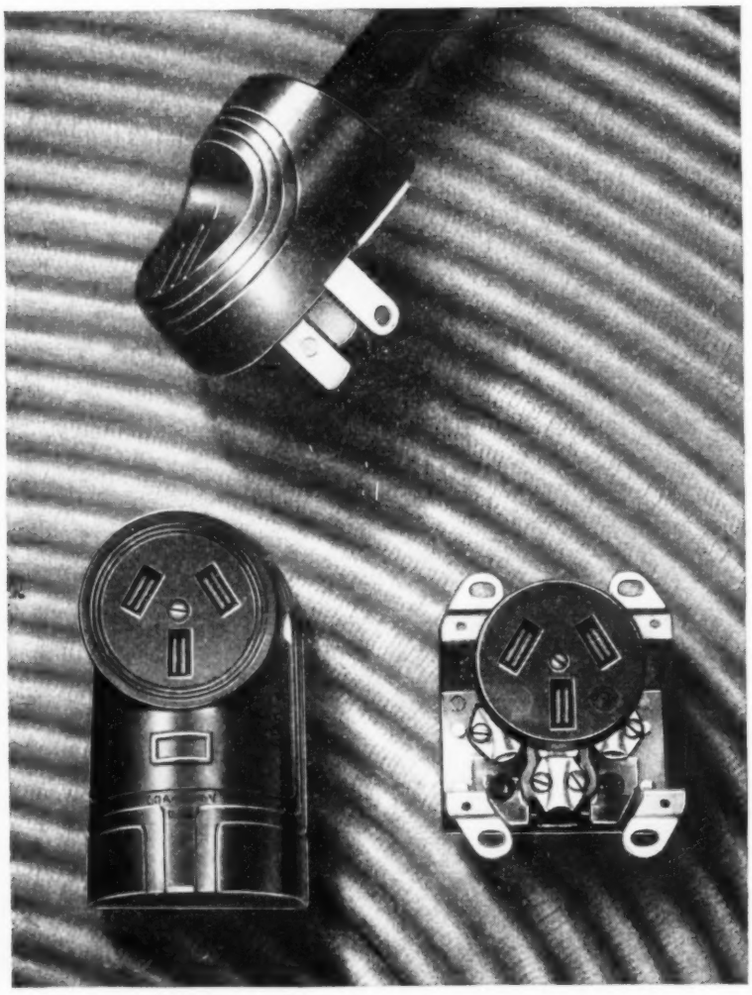
RANGE OUTLETS

H&H

3-Wire, 50 Amp., 250 V.

with 90°-angle

RANGE CAP



Upper figure: Range Cap No. 7952 of polished black Bakelite, designed to match the Receptacles. Lower left: Range Outlet No. 7950, surface type; polished black Bakelite. Also available in white Ivorylite: No. 7950-I. Lower right: Range Outlet No. 7987, flush type; polished black Bakelite. If wanted with .040" brush brass plate, specify No. 7990; with .060" plate, No. 7991.

These quickly-wired Outlets and Caps have every improved feature for easy installation *and use.* Straight-in wiring with solderless connectors make fast work of range hook-ups. *Surface* Range Outlet No. 7950 has built-in cable clamp interchangeable for back or bottom wiring. 2-screw contacts; 3/4" and 1" knockouts provided. *Flush* Range Outlet No. 7987 (with 2-screw contacts) is designed for 4" or 4 11/16" box and standard 3/4" plaster cover. Requires no special attachments. Grounding slots and contacts in the plate.

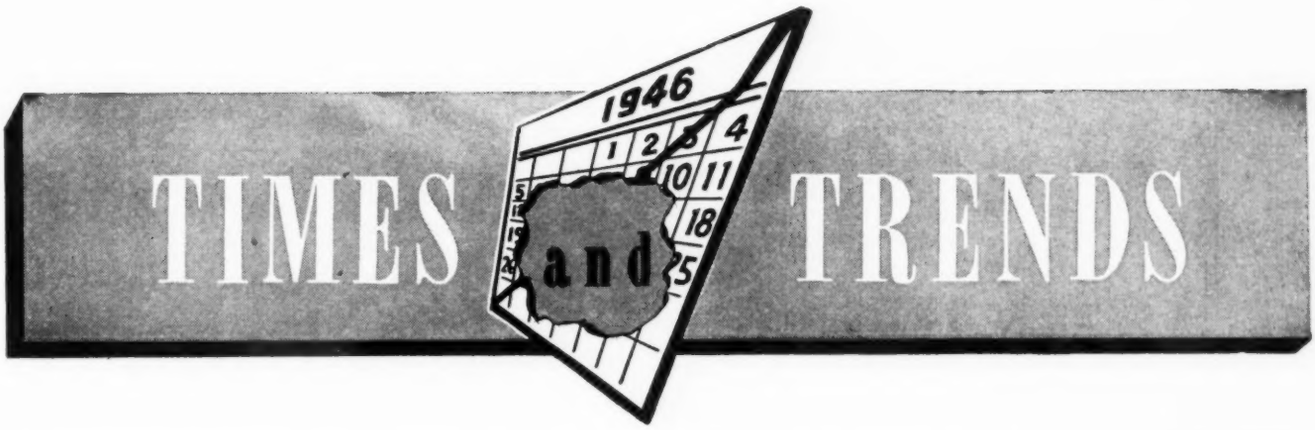
Both the surface and flush types take Range Cap No. 7952, for straight-in wiring and solderless connections. Built-in cable clamp eliminates awkward right-angle cable connections. Adapted for use with 3-wire all-rubber cable as well as metallic or non-metallic sheathed cable. Ground straps on Cap connect with ground clamp on Receptacle for easy and secure ground connections. Cap and Receptacle combination make a neat, compact installation with attractive harmony of design.

DISTRIBUTED THROUGH ELECTRICAL WHOLESALERS

HART & HEGEMAN DIVISION

ADEQUATE WIRING SERVES AND SAVES

THE ARROW-HART & HEGEMAN ELECTRIC COMPANY, HARTFORD, CONN., U. S. A.



"Buyer's Strike" or Sellers Strike?

In Greater New York a number of consumer groups right now are proposing to organize buyer's strikes as a protest against what they consider excessively high prices on foods, clothing, soft goods and other necessities. Elsewhere and particularly among larger retailers, the possible imminence of a wide-spread buyer's strike is being discussed with increasing frequency. In fact, some who lean strongly toward that belief are actually talking of "trimming their sails" in various ways, so as to be ready for whatever may come.

In a period, when past and current strikes and the resulting critical shortages of raw materials have already contributed much toward creating a state of mild jitteryness here and there, it certainly is not the time to drag any phantom threats across the tracks of a business world that is just getting its stride toward achieving that post-war "full employment" boom. Hence it seems appropriate to present here a few facts that should effectively deliver a knock-out blow to that "buyer's strike" talk, at least in so far as the electrical industry is concerned.

Basically a buyer's strike can develop only when a considerable sector of the consuming public reaches the conclusion that certain goods *that are perhaps not actually needed but merely wanted* are not worth the price that is being asked for them. Then such goods first stop moving out of the stores of the retailer or dealer. Next they begin to jam the wholesalers' warehouses. Finally they back up on the manufacturer and when that becomes evident, inevitably something happens: The prices go down. And, when prices get down to where the public thinks that the goods are worth it, their flow into the hands of consumers is resumed.

Today we appear to be far away from the point where any important group of products, or electrical goods are "no longer actually needed." As a matter of fact, our 140 million people *need* practically everything and, what is even more important, they command the buying power to buy what they *need*.

Where do they get that buying power? Well, first from current national income. In 1939 national income payments were nearly $71 billions. Right now, July 1946, national income is rolling into the pockets of our population at the rate of $157 billions per year, or at over double the rate of 1939 and it is still increasing so that 1947 is expected to push our national income up to $172 billions or nearly 1½ times more than it was in 1939.

What have people been doing with their income? They have pushed savings bank deposits up to an all-time high. They have bought and are holding many billion dollars' worth of war bonds. And, *they have spent a lot of it* but **they have had but little chance to spend money on those things that they need, which only the electrical industry can supply.**

The *needs* of homes with adequate electrical wiring, the *needs* for better lighting equipment everywhere, the *needs* of refrigerators, washing machines, vacuum cleaners, the *needs* of other large and small appliances had continued to pile up during the war. They exist today—a year after V-J day—because reconversion activities, strikes and resulting shortages have combined to keep the electrical industry from satisfying those needs.

In other words the money that people have spent during recent years went chiefly for food, absolute necessities and so-called non-durable goods and on those they have been spending 15 percent *more than normal*. And, what is extremely important to the electrical industry, in the same period they spent 50 percent less than normal on durable goods, for the very good reason that they were unable to get them. **But, their need of those durable goods continues to exist.**

What does all that mean? Simply that with income continuing to rise, the public will shift its emphasis from buying non-durable goods to durable goods and that classification includes electrical products.

However no dealer or salesman or wholesaler should expect that as long as those needs exist, the buyers will flock in and take available goods away indefinitely. Already competition among manufacturers of certain durable electrical products is rising to concert pitch. New manufacturers, with new products and war-born know-how are bidding for a slice of the national cake. New wholesale and retail outlets are overcrowding many areas and will be waging intensive battle for a bigger share of he local consumer dollars. Competition

Think how the wire that survives such severe hazards can serve you under normal conditions

Densheath*

TYPE T & TW BUILDING WIRE

Reg. U. S. Pat. Off.

★ Densheath insulation, a synthetic compound, is remarkably durable because of its great density. Finish is smooth, polished.

★ Highly resistant to moisture, acids, alkalies, chemicals, mineral, animal and vegetable oils.

★ Flameproof—won't ignite, burn or support combustion.

★ Surprisingly pliant. No "spring." Retains sharp bends.

★ Superior to any rubber compound in super-aging qualities, resistance to ozone, oxygen and sunlight.

★ Superior to usual grades of rubber insulation in dielectric strength. Good insulation resistance. Low specific inductive capacity.

★ Resists reasonable degree of abrasion, tearing, bending and flexing.

★ More circuits per conduit—for new installations, extensions and maintenance.

★ Strips easily; leaves bright conductor.

★ Densheath insulated wire and cable can be used anywhere Type R is allowed.

Densheath is ideal anywhere cables are subjected to extreme conditions. Its flexibility and resiliency fit it for many installations in confined spaces. Available in a variety of colors. Anaconda Wire & Cable Company, Subsidiary of Anaconda Copper Mining Company, General Offices: 25 Broadway, New York City 4; Chicago Offices: 20 North Wacker Drive 6; Sales Offices in Principal Cities. 40517

ANACONDA

ANACONDA WIRE & CABLE COMPANY

between sellers of various types of durable consumer goods will be keener than ever before.

Prices, particularly of electrical goods will not rise above average comparable index levels, because competition between manufacturers, distributors and dealers will serve as a precious balance wheel or governor against sky-rocketing.

We believe that the electrical industry is today at once in a highly enviable and also in a highly vulnerable position. It will take several years to satisfy the current and constantly expanding electrical *needs* of our 140 million people.

If a real buyer's strike should become evident anywhere in the not too distant future, it should not be able to touch the electrical industry at all, for the electrical *needs* of the people will not have been satisfied.

Nevertheless, great harm could come to the electrical industry if the period of easy sales which lies immediately ahead should result in a relaxing of sales effort, of promotional and advertising activities, should cause a softening of its fighting fibre.

No one can dispute the fact that the greatest sales opportunities in the history of the electrical industry NOW lie ahead. Nor can anyone challenge the statement that the period of greatest competition in history lies ahead.

Therefore, wherever during the next few years that term "buyer's strike" is employed by anyone, as affecting some branch or unit of the electrical industry. Brother, just take our word for it, it will not be a buyer's strike at all. It will be a case of the sellers and salesmanship having gone on strike, having deteriorated, grown ineffective, lazy, soft.

If you fail in making during the period ahead your greatest sales records, don't cry "buyer's strike." You'll be marked as fellow traveller in a "Seller's Strike."

★

Construction Record According to F. W. Dodge, reports construction contracts awarded in May 1946 set a new peace time record, with a total of $952 million, 30 percent above April 1946. Residential contracts were up 25 percent while non-residential contracts reached a new post-war high of $291 million, exclusive of public works and utilities.

Meanwhile completion of construction jobs under way continues to be retarded by shortages of materials due to strikes and other causes, with present indications pointing to only slow improvement until after the turn of the year. Mid-1947 is expected to see the supply of all types of building material catching up with current demand.

★

Jobs Make Business Elsewhere we have referred to the fact the National income during 1946 and 1947 is expected to break all records, will run up to 1½ times more than in 1939.

For those who are skeptical about that prediction and may wonder where that income will come from the U. S. Census Bureau supplies interesting food for thought: During June 1946 civilian employment increased to 56,740,000, surpassing the goal of 56,500,000 which had been set for 1950 as representing the ultimate.

Well, during the war we did all the things that the world expected from us and a lot of gigantic jobs that had been pronounced as impossible. Now with "peace" only a year old, private enterprise has again done the impossible, has provided more jobs than were foreseen by the most ambitious crystal gazers.

★

Spotlight On Rural Markets The Rural Electrification Administration has just reported, that loan approvals from 1946 funds totalled $290 million, the largest amount ever allocated in a single year. It will add 180,000 miles of power distribution lines in 45 states and put approximately 565,000 new customers on REA-financed rural electric power systems.

Summing up the sales potentials in the rural markets throughout the country, the U. S. Department of Commerce estimates that farmers can use $4,000,000,000 worth of electrical wiring installations, equipment and appliances. It suggests also that of the 2,500,000 farms with electric service in 1944, no less than 1,750,000 are potential buyers of electric water systems, 500,000 of electric milkers and 700,000 of electric milk coolers.

Perhaps those figures are too ambitious but, no matter how much a conservative forecaster might trim them down, the rural market looms large. Thar's gold on them thar farms, for the salesmen and wholesalers who are willing to cultivate contractors and dealers in rural areas.

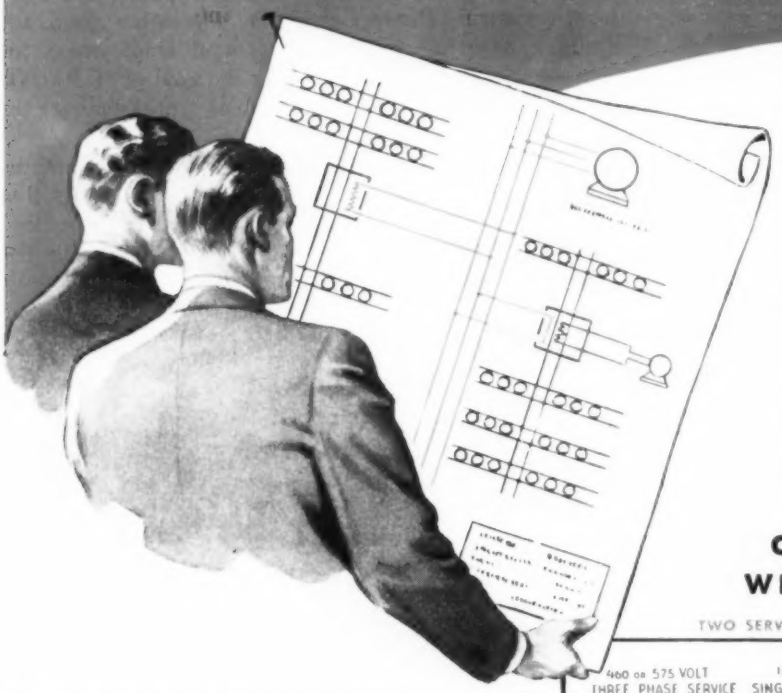
★

Lumber During April 1946 lumber production totalled 2,900 million board feet, an increase of 12.2 percent over March and 14.2 percent more than April 1945, says the Civilian Production Administration.

If such increases in production continue, lumber may before long cease being a favorite source of income for the black market racketeers, even though the bulk of it reaches local yards "green," oh, so very green.

EDITOR

CUT PLANT WIRING COSTS

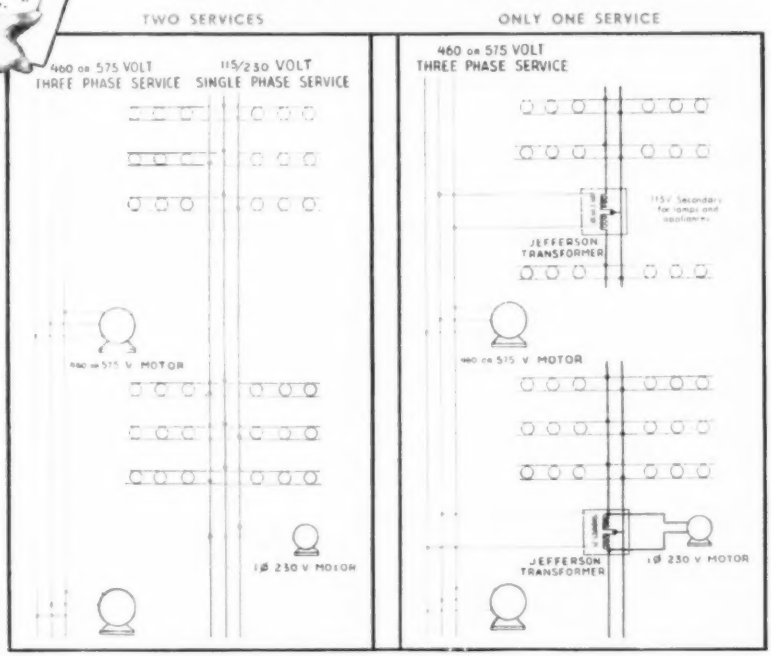


When it comes time to re-wire your existing building or if there is a new plant on the drafting boards, it will pay in definite economies to consider Jefferson Power Circuit Transformers. The use of this type transformer, in providing for low voltage circuits, eliminates the wiring system which would otherwise be required for 115 volt devices. Thus, only the higher-voltage, lower-cost circuit (230, 460 or 575V) needs to be installed, resulting in valuable savings of copper, conduit, fittings, labor, and power costs.

Since Jefferson Power Circuit Transformers are the dry type, they can be mounted at convenient locations throughout the plant—on wall, post, or directly on the machine to provide the 115 volt current required for lamps, fans, control push buttons, electric heating and small, motor-driven equipment. No special vaults are required, each transformer being self-contained and air cooled. Each unit is also equipped with a roomy wiring compartment with knockouts for rigid or flexible conduit connections.

Over 30 years' experience and production of transformers is assurance of highly efficient, long-wearing service. Submit your particular problem today. JEFFERSON ELECTRIC COMPANY, Bellwood (Chicago Suburb), Illinois. *In Canada:* Canadian Jefferson Electric Co., Ltd., 384 Pape Avenue, Toronto, Ont.

COMPARE THESE TWO WIRING INSTALLATIONS


TWO SERVICES
460 or 575 VOLT THREE PHASE SERVICE
115/230 VOLT SINGLE PHASE SERVICE
460 or 575 V MOTOR
1Ø 230 V MOTOR
ONLY ONE SERVICE
460 or 575 VOLT THREE PHASE SERVICE
JEFFERSON TRANSFORMER
460 or 575 V MOTOR
JEFFERSON TRANSFORMER
1Ø 230 V MOTOR

LEFT: This diagram shows two service entrances—one 460 volts and the other 115 volts—requiring two entirely separate wiring systems. **RIGHT:** The same requirements are met by the more economical wiring plan through the use of Jefferson Power Circuit Transformers. Current is purchased at 460 volts and there is only one service entrance.

JEFFERSON ELECTRIC

Power Circuit Dry Type

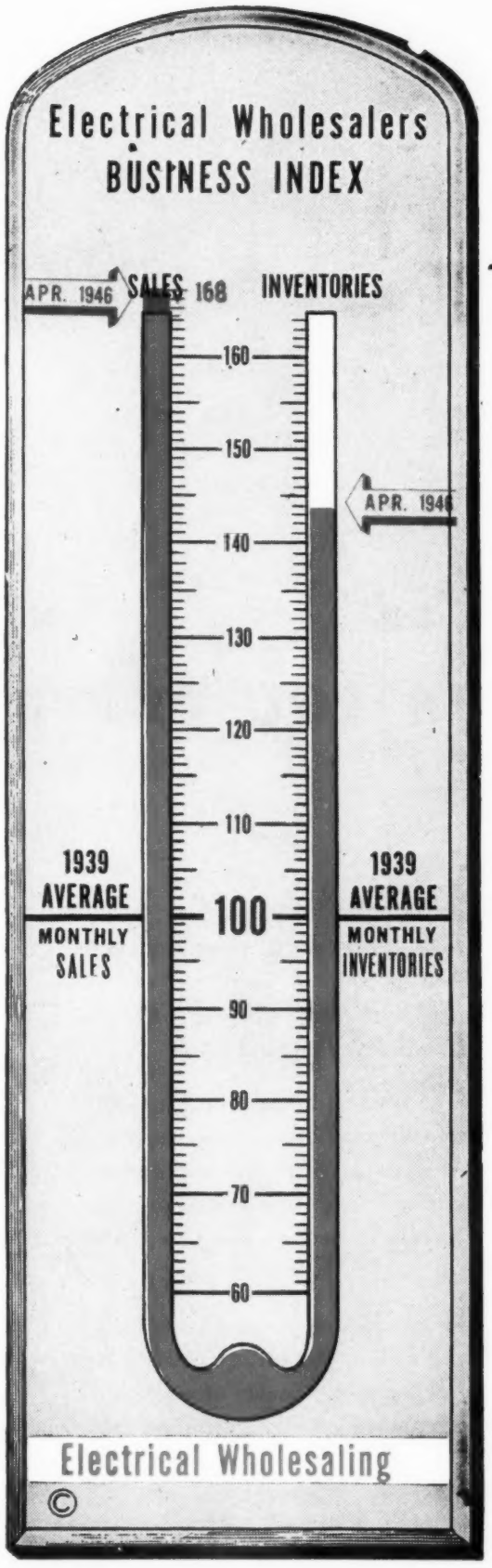
TRANSFORMERS

Just Off the Press

New illustrated Bulletin 461-PCT containing detailed suggestions and installation applications now available. Write for your copy today.

ELECTRICAL WHOLESALING

FORMERLY WHOLESALER'S SALESMAN



SOURCE The figures we use as basis for these monthly comparisons of performance in the electrical wholesaling field are collected and compiled by the Bureau of the Census of the U. S. Dept. of Commerce.

Business Index
For The Month Of April 1946

SALES What well may be the beginning of a slowly rising sales volume for electrical wholesalers was indicated by the 7 percent gain in sales reported for the month of April. This gain for April over March, following a 4 percent gain in March over February, seems to show that wholesalers are starting slowly on their way toward the large peace-time volume that has been expected for so long. As these small but steady increases have come in months when the effects of the steel and coal strike were still hindering production, it is probable that they will be followed by more sizable jumps in volume, now that the most important strikes are settled.

Although these month-to-month figures show only small gains, and the general feeling in the wholesaling houses is that the last 8 months of industrial strife have knocked the wholesaling business "for a loop," it is noteworthy that wholesalers' dollar volume in April was 68 percent larger than the 1939 average monthly dollar volume, and 22 percent greater than the volume of April 1945.

INVENTORIES For the second successive month, wholesalers of electrical goods reported an increase in inventories. The 2 percent increase in April over March represented a gain of 44 percent above the 1939 average monthly inventory, and an increase of 42 percent over April of last year.

Although it is apparent that the supply of many staple electrical items is still critical, the return in small quantities of many types of goods which were not produced during the war years, has tended to build wholesalers' stocks above previous levels. And, with good indication that deliveries of both major and traffic appliances are rising steadily above the level of the winter months, it may be expected that wholesalers' inventories will continue to increase even if there continues to be a shortage in wire, cable and devices.

COLLECTIONS The collection percentage for April 1946 was 96, the same as for April of last year, and 3 points more than the collection figure for the previous month. Accounts receivable in April were 3 percent higher than for March, and were 17 percent higher than for April of last year.

READY TO SERVE YOU BETTER

PRODUCTS OF ROME CABLE CORPORATION

Hot Rolled Copper Rods

Bare and Tinned Wires and Cables
Solid and Stranded
Round, Square, and Rectangular

Weatherproof Wire and Cable

Magnet Wire
Cotton, Paper, Asbestos,
Glass Covered

Building Wires and Cables
Rubber and Braided
Rubber and Lead Covered
*SYNTHINOL Thermoplastic Insulated
*RoCaFlex Non-metallic Sheathed

Flexible Cords
Rubber Insulated
*SYNTHINOL Thermoplastic Insulated

Radio and Instrument Wire
Rubber Insulated
*SYNTHINOL Thermoplastic Insulated

Heavy Duty Cords
Rome "60" Rubber Jacketed
Rome "60" Neoprene Jacketed
*SYNTHINOL Thermoplastic Insulated

Heavy Duty Portable Cables
Rome "60" Neoprene Jacketed
Mining, Welding, Power (Type W)

Power and Control Cables
Neoprene Jacketed
Rubber Insulated and Lead Covered
*SYNTHINOL Thermoplastic Insulated

Service Drop and Service Entrance Cables

*Trademark

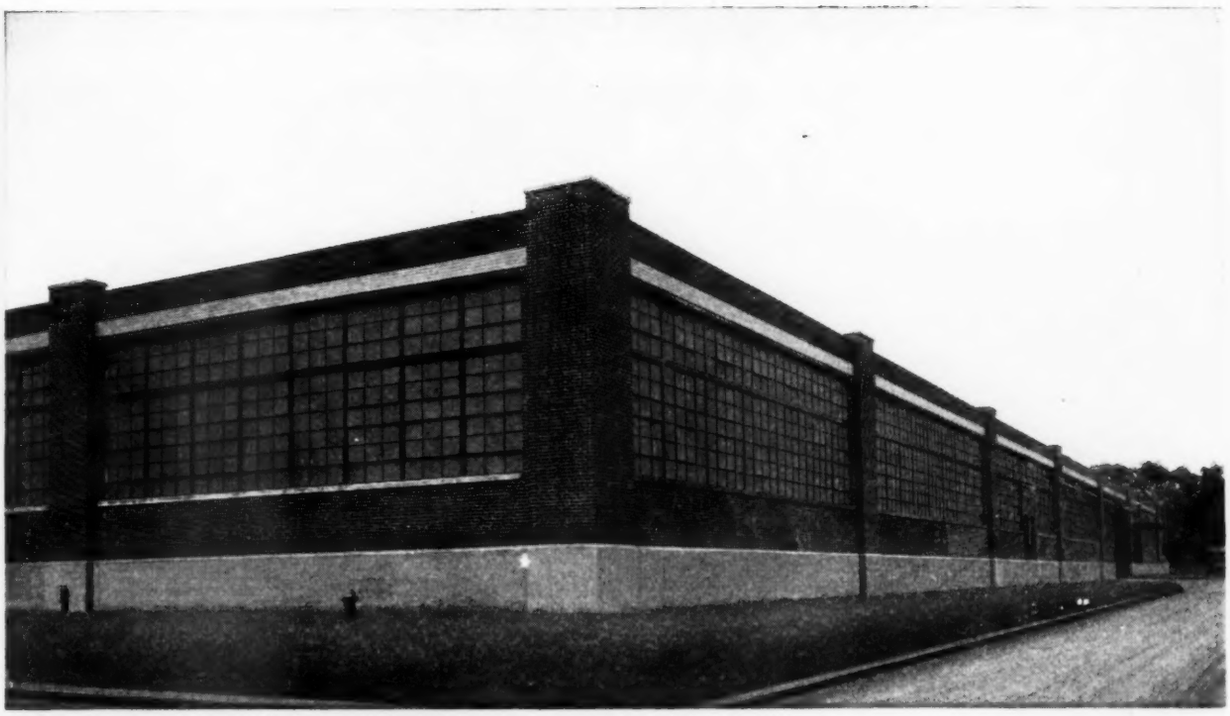
Ten years old this July . . . . .

Since July 15, 1936 when our first shipment was made, we have produced many millions of pounds of copper wires and cables and billions of feet of insulated wires and cables.

For a decade, in War and Peace, Rome Cable has devoted the accumulated "know-how" of its experienced organization to the development and the manufacture of an ever-broadening line of wires and cables to better serve you . . . our customer.

This tenth anniversary finds us working as hard as ever to serve further the electrical industry with diversity of product, honesty of workmanship, and a continued high standard of quality.

You can buy Rome Cable products with complete confidence.



WITH A NEW PLANT ADDITION

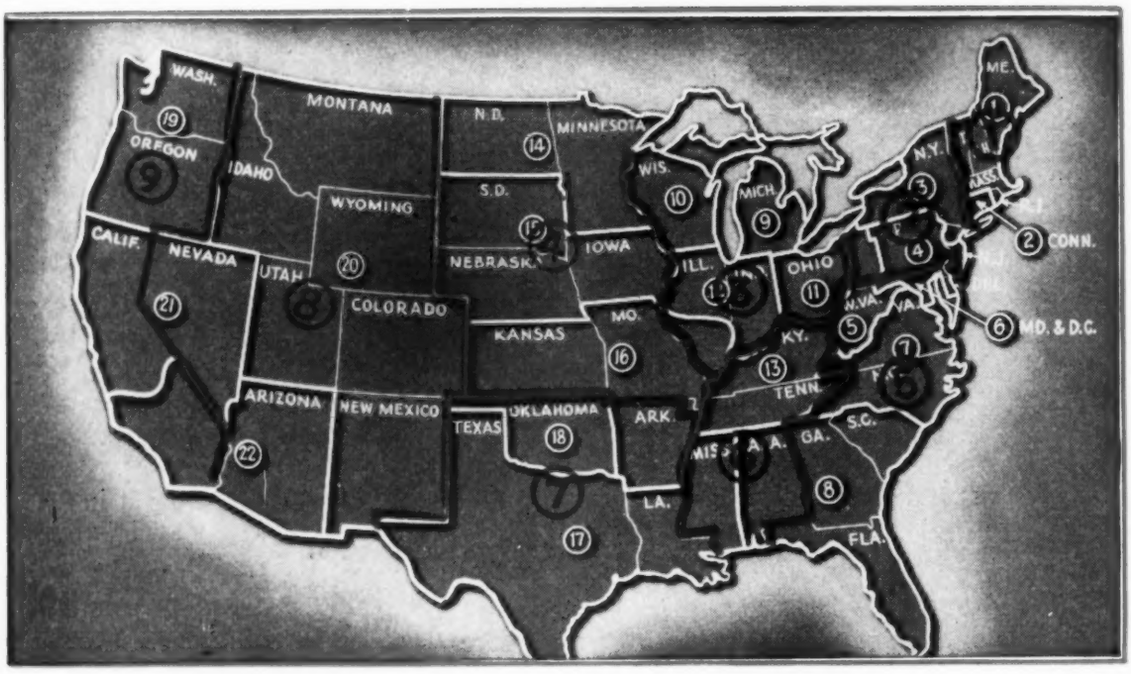
Long hours of planning have gone into the modernization of all our plant facilities and installation of our rubber covered wire department in a new building pictured above. Dedicated to the production of better wires and cables, these improvements will benefit you . . . with new products and increased production.

In our constant search for new and better materials with which to make more durable products, a larger and better equipped laboratory was a vital part in the development of our plans. Since its start, Rome Cable has been proud of its research and product quality control. Our engineering and laboratory staffs welcome your cable problems.

As Romey would say, "It's all part of our desire to serve you with more and better wire and cable products."

FROM BAR TO FINISHED WIRE

ROME CABLE
CORPORATION
ROME · NEW YORK



Electrical Wholesaling BUSINESS INDEX

REGIONAL ANALYSIS

ALTHOUGH all but two regions reported gains in sales during April, the distribution of sales was not evenly balanced among the other seven regions.

Five groups of states showed sales gains greater than the figure for the country as a whole, with region 6, the East South Central states, leading with a gain of 20 percent above the previous month.

As has been true in many of the months since the end of the war, sales volume in each region seems to reflect strictly local conditions, rather than the local effect of national or seasonal trends. This is evidenced, for example, in the reports from industrialized New England and the Pacific Coast regions—group of states which in normal years should react similarly to national business conditions—but which in April showed a monthly gain of 6 percent in sales for the New England States while the Pacific Coast states were reporting a decline of 2 percent from the previous month.

At the same time that the South Atlantic states showed a drop of 5 percent from the March level, the adjacent states of the East South Central region were enjoying a gain of 20 percent above the March volume.

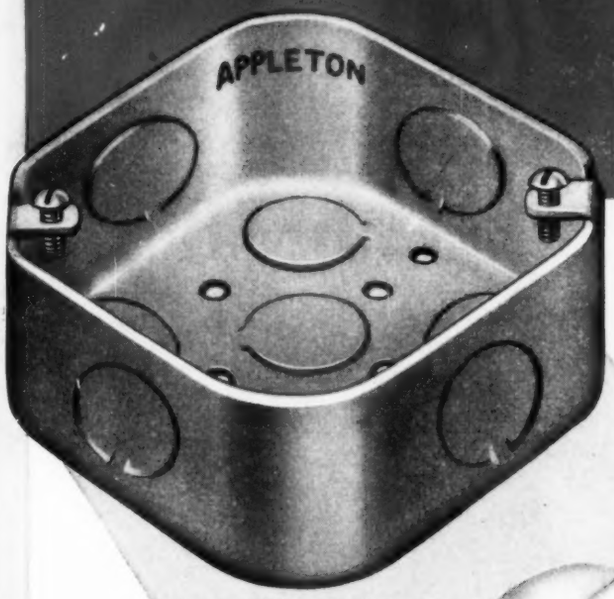
It seems likely that this condition will continue for at least a year. Before nationwide ups-and-downs, and the normal seasonal trends, will again be the overall influencing factors on the index, the troublesome war-born and post-war problems—over-demand and under-supply, low inventories, shortage of raw materials, black market diversion of supplies, backlogs in appliances, housing and commercial building, etc.—will have to be cleared up.

APRIL, 1946

Figures in this table apply to the geographic divisions as outlined and numbered in color on map above

SALES April, 1946 Compared in % with Mar., 1946	SALES April, 1946 Compared in % with Apr., 1945	Trading Region (See Map)	INVENTORIES April, 1946 Compared in % with Mar., 1946	INVENTORIES April, 1946 Compared in % with Apr., 1945
106	113	1	103	158
112	93	2	105	133
115	150	3	103	164
112	147	4	96	126
95	117	5	107	144
120	123	6	109	179
109	145	7	76	109
100	188	8	113	153
98	107	9	106	132
107	**122**	For **U.S.A.**	**102**	**142**

STANDARD for BETTER WIRING



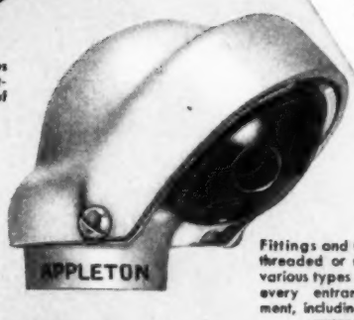
Square and Octagonal Outlet Boxes in various sizes, with a wide selection of covers. Also Switch Boxes of every type and size.

COMPLETE APPLETON LINE

Answers *Every* Wiring Requirement

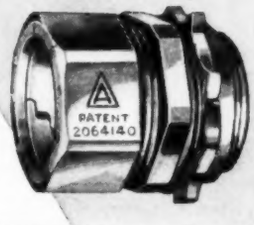
● Outstanding in completeness—the Appleton line of over 15,000 items offers a size and type of electrical fitting for every preference and specification! . . . That means time-saving, easy installations!

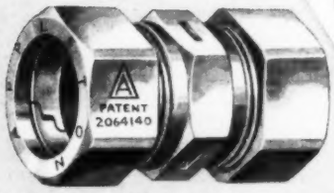
All fittings and fixtures are made in Appleton's own foundries and fabrication plants, designed to the most exacting standards of high quality and rugged dependability — they'll last the life of the building! That means money-saving, efficient operation!

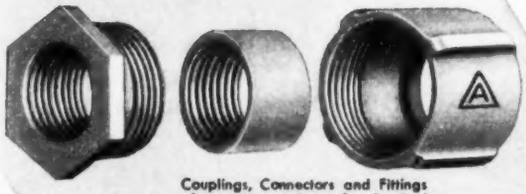


Fittings and Connectors, threaded or no-thread, in various types and sizes, for every entrance requirement, including REA cable accessories.

Be sure that your customers have—and use—the big Appleton Catalog with complete descriptions of 15,000 items.







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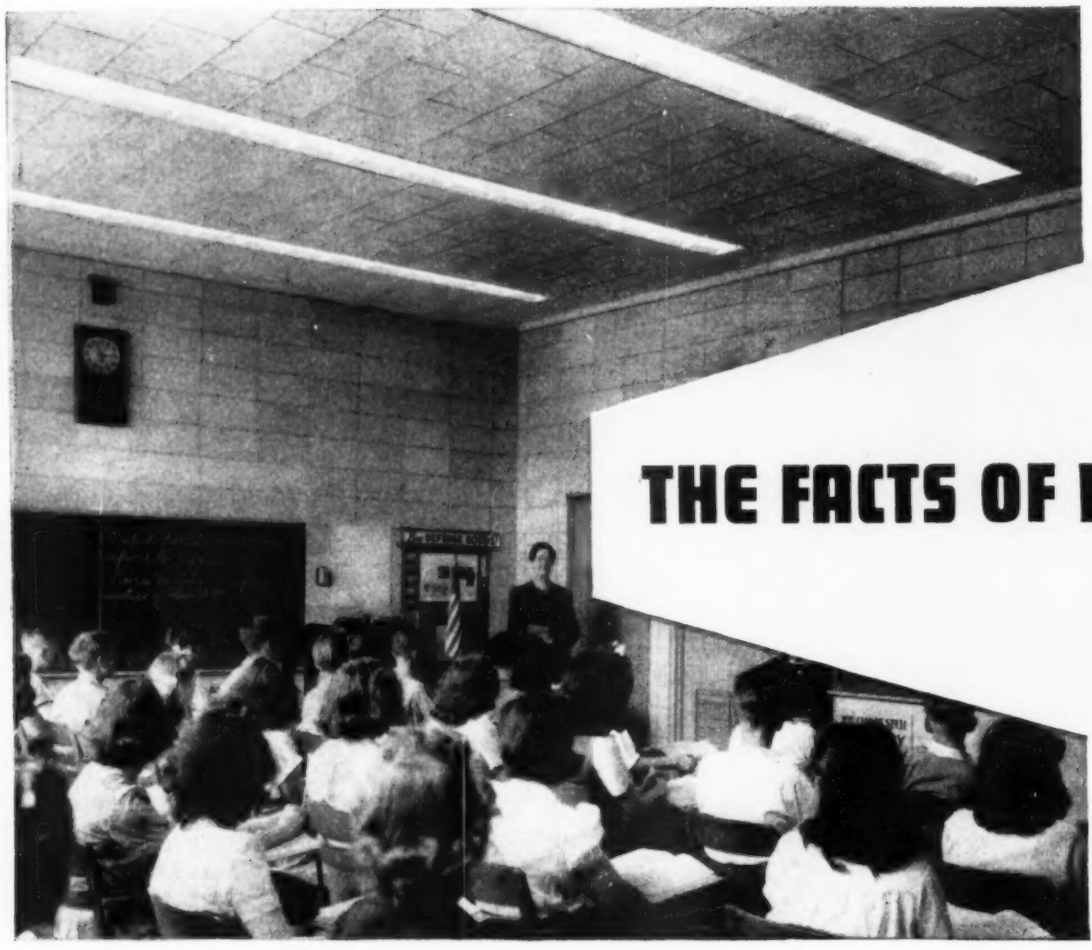

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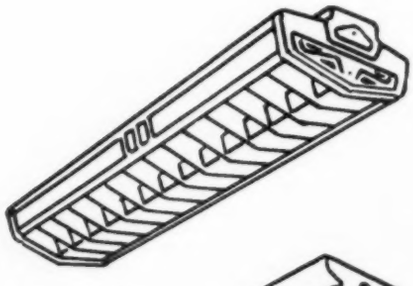

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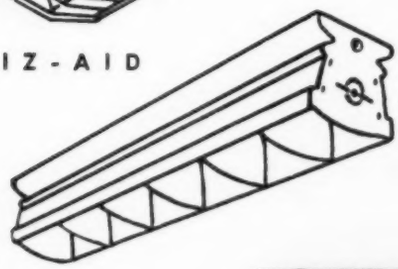

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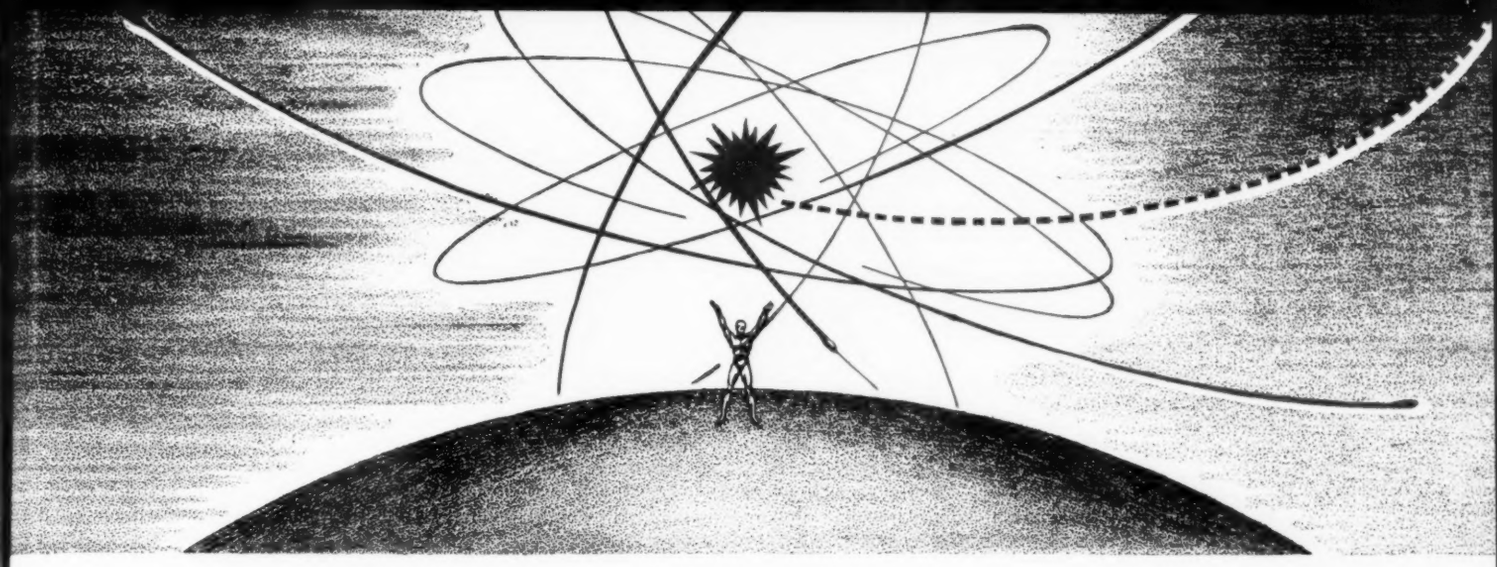

MAN vs ATOM—YEAR 1

WHEREIN WE SIGNALIZE THE FIRST ANNIVERSARY OF THE ATOMIC AGE, CONSIDER THE ALTERNATIVES INHERENT IN BOTH GOOD AND EVIL POTENTIALITIES OF NUCLEAR FISSION, THEN VENTURE A GLIMPSE INTO THE FUTURE

A YEAR AGO, July 16, 1945, at Alamogordo, New Mexico, man created the first atomic explosion. Most impressive events diminish in stature as they recede in time. This one grows bigger with each passing day. It truly marked the beginning of a new age.

As Year 1 of the Atomic Age ends and Year 2 begins, we are engaged in three portentous projects.

At Bikini Atoll we are detonating the fourth and, possibly, the fifth atomic explosions in the history of the world.

At Oak Ridge, Tennessee, we are building the first atomic energy plant for peaceful purposes.

Most important, in New York we and all the other United Nations are engaged in the first attempt to subject atomic energy to international control. Literally, the fate of the world hangs on this attempt.

As this introduction is written, the United Nations Atomic Energy Commission has just begun its work. People everywhere pray for its success—for their own sake, but even more for their children and for their grandchildren. If this Commission fails let everyone everywhere be warned: the world has taken a step toward destruction.

As we enter the second year of the Atomic Age, the nations of the earth are embarked on an atomic armaments race. There is no blinking that fact. We have had official notice served on us. Therefore, we must understand that unless the United Nations Commission can arrest the drift of events, we are moving toward a horrible war. The Commission must succeed.

The American delegate, Mr. Baruch, has brought to the Commission an ably thought out plan. It would internationalize nuclear science, and release for mankind the beneficent applications of atomic energy. But it would "control" atomic bombs only to the extent of giving the world brief warning of any nation's preparation to use them, so that we might have foreknowledge of disaster.

Therefore, the real and enormous task before the world becomes clear. We must end war. No other control of atomic weapons exists. If war comes, atomic weapons will be used. If they are used, our children who survive will curse their fathers. Understanding the consequences of failure, we *must* succeed.

Because we cannot succeed without knowledge, I have asked my associates at McGraw-Hill to condense into the following pages what we know at the close of Year 1 about this great new atomic force — its basic science, its possible uses and its political repercussions.

James H. McGraw, Jr.

President, McGraw-Hill Publishing Co., Inc.

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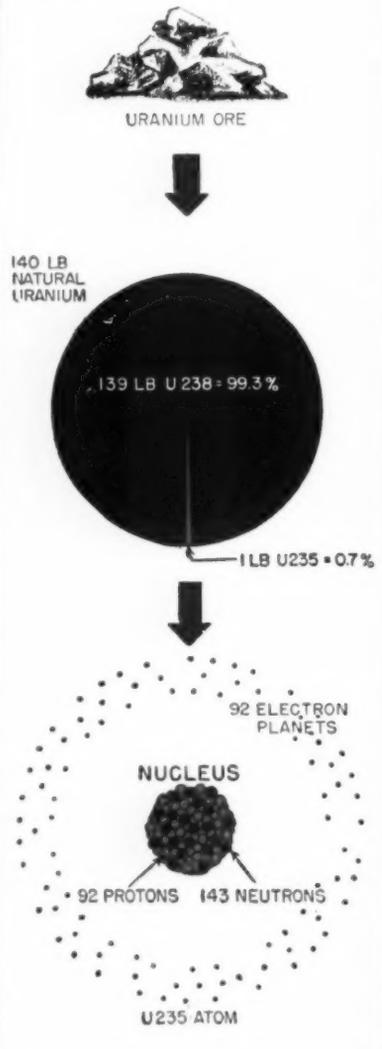
This Fateful Atom...

1 ORE TO U235

Only 0.7% of natural uranium is U235



LOOKING BACK twelve months to the birth of Year 1, Atomic Age, we begin to sense the majestic import of the atomic bomb that blasted the naked desert at Alamogordo, N. M., on July 16, 1945. There man first shattered atoms in an explosive *fast-chain* reaction. Then came Hiroshima and Nagasaki.

In every case the fateful atom was either uranium 235 (U235), or plutonium derived from the action of U235 on U238. Every pound of U235 atoms split in these unprecedented blasts yielded the energy of 11.4 million kilowatt-hours, or 1400 tons of coal — slightly more for plutonium.

No matter where one mines uranium ore, the purified natural uranium (Fig. 1) always contains 99.3% of the "garden" variety U238, and a mere 0.7% of the precious U235.

An atom is like our solar system. The central sun is the nucleus — a bunched mass of protons and neutrons, each weighing one unit. The planets are electrons. Each proton has one plus electrical charge — each electron an equal negative charge. There must be as many negative electron planets as positive protons in the nucleus. This is also the "number" of the atom. Neutrons have no charge, but add weight.

The atomic number of uranium is 92 because the uranium atom always has 92 nuclear protons and 92 electron planets. The isotopes U238 and U235 differ only in the number of neutrons; U238 has 146 neutrons, and weighs 92 + 146 = 238 units. U235 has 143 neutrons, and weighs 92 + 143 = 235 units.

Ordinary chemical reactions, such as TNT explosions, release only a fraction of the modest energy of the whirling electrons in the outer atom. Nuclear reactions unlock the immensely greater energies which bind together the nucleus.

Even the gentle tap of a slow-moving neutron bullet will split the atom of U235 or of man-made plutonium into two medium-weight atoms, yielding also one to three spare neutrons plus energy. Thus these *fissionable* materials supply both their own bullets and a highly sensitive lot of high-explosive targets — a perfect setup for a *chain reaction* (Fig. 2).

Chain reactions work like chain letters. Neutrons from one nuclear explosion hit and explode other nuclei. But, since atoms are mostly open spaces a chain started in a small block of U235 or plutonium quickly dies out because most of the released neutrons escape from the block.

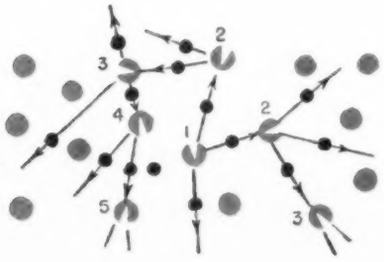
The bigger the block, the smaller will be the percentage of escaping neutrons, and the more left to split other nuclei. When the block is rapidly built up beyond a certain secret size the fragments of 1000 nuclear fissions split many more than 1000 additional nuclei. Then fissions multiply geometrically, and the block disintegrates with explosive speed and violence — as in a bomb (Fig. 3).

This bomb explosion is a fast-neutron chain. For economy and ease of control, uranium piles for the gradual release of nuclear energy for commercial purposes will normally use a lean fuel — that is U235 or plutonium diluted with U238, thorium or other less costly materials.

To maintain a chain reaction such piles must be large and artificially stimulated by using carbon blocks or some other *moderator* (Fig. 4) to slow many of the neutrons. Slow neutrons make more hits than fast neutrons because there is more time for them to be swerved from a straight path by the attraction of nearby nuclei, as shown below.

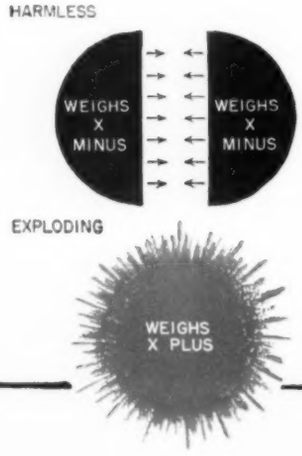
2 CHAIN REACTION

Fragments from earlier nuclear explosions smash other nucleii



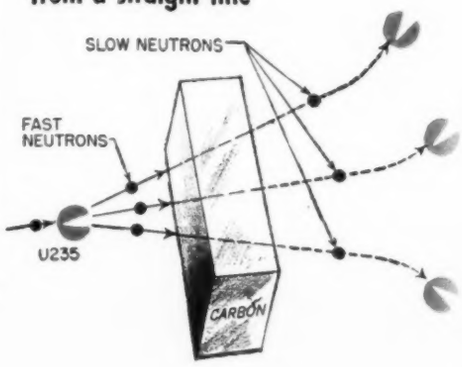
3 WHY BOMB EXPLODES

When block of rapidly assembled U235 passes secret critical size it explodes spontaneously



4 SLOW NEUTRONS MAKE MORE HITS

A slow neutron is more easily swerved from a straight line



can Serve Man . . .

THE FATEFUL U235 ATOM can serve man as a new, compact source of heat energy for power generation, comfort heating or industrial processing. Peacetime applications of atomic energy will use dilute U235 or plutonium as a "fuel," mixed with carbon or some other moderator to slow some of the neutrons and thus keep the chain reaction going.

The diluting agent may be either U238 or thorium, or both. These will do double duty, because neutron bullets convert U238 into the energy-yielding plutonium, and thorium into U233, which may prove equally serviceable.

Thus the commercial piles of the future will "burn" U235 to make other atomic fuels, plutonium and possibly U233, which in turn will deliver heat energy to the pile. In that way it will be possible to get from the pile far more heat than the equivalent of 1400 tons of coal for each pound of U235 split. This highly attractive prospect will speed the day when nuclear energy can compete with coal.

While already mechanically obsolete, the piles making plutonium for bombs at Hanford, Wash. (Fig. 1) reveal the basic principle on which future piles for power and heat will operate. The heat now wasted in vast quantities will be put to work. The plutonium, now removed for bomb manufacture, will be returned to the pile (or left in) as supplementary fuel.

ATOMIC POWER

The possible everyday applications of nuclear heat pictured in Fig. 2 have been recognized from the very first day of the Atomic Age. Year 2 will see the building of the world's first atomic power plant (a pilot plant) at Oak Ridge, Tenn.

Beyond question such installations will produce power, but it may be years or decades before they prove economical. To compete with conventional plants the piles must first be redesigned to run at temperatures high enough for good power-plant efficiency. Also the techniques of operating piles by remote control through the heavy radiation screens must be radically streamlined.

The Hanford piles run on natural uranium containing only 0.7% of U235. The typical commercial atomic power plant of the future will use more than 0.7% of U235 or plutonium, but less than 50%. This will avoid both the low efficiency of the too-lean mixture and the excessive fuel cost of the rich mixture. It will permit piles of moderate size and take maximum advantage of U238 and thorium as potential sources of plutonium and U233.

One should not expect U235 to replace coal generally in this generation, although a few central power stations and ships will try it out before Year 10 of the Atomic Age. Plants far from traditional sources of fuels may turn much sooner to uranium and thorium as concentrated heat sources, that may easily be transported even to remote corners of the earth.

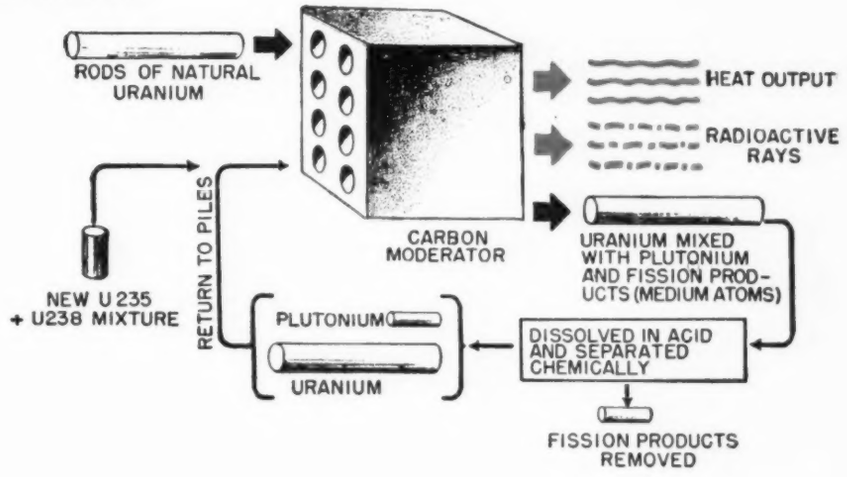
Atomic power, in forms now known, is impracticable for automobiles and small airplanes, because of the large initial investment in uranium and the need to carry 50 tons of shielding to protect riders and pedestrians against the deadly radioactivity accompanying nuclear fission.

RADIOACTIVE ISOTOPES

More immediately important than the heat and power applications of nuclear energy are the services that the radioactive byproducts of pile operation can render. Because these materials act chemically like their ordinary non-radioactive cousins, but can be followed and detected easily, they are expected to play tremendously vital parts in medicine and biology. For more details, see the last page of this section.

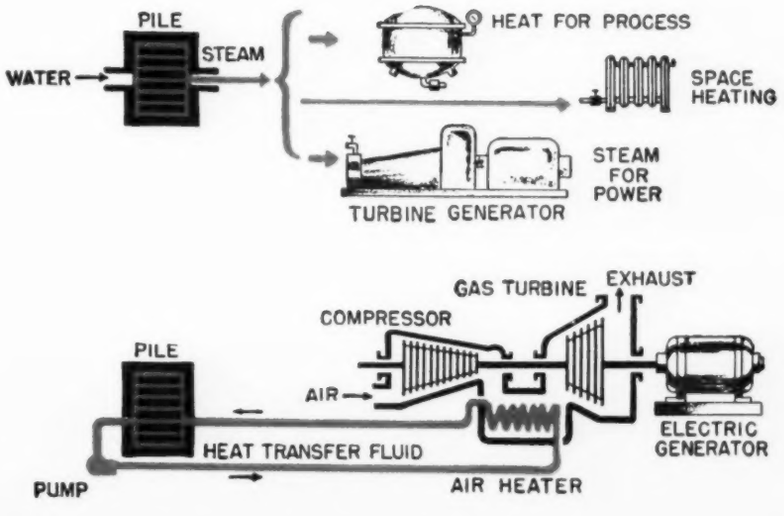
1 SLOW-NEUTRON PILE

Can make plutonium for bombs—or heat for power, process and comfort



2 PRACTICAL APPLICATIONS

Include steam for turbines, process and comfort heating—also heat for gas turbines



or Destroy him . . .

A single improved atomic bomb can devastate ten square miles of city

URANIUM 235 and plutonium are now man's slaves. They will build or destroy as he orders. Man dreads this vast force only because he distrusts himself. War is proof that man in the mass has never achieved self-control. He has always sought better weapons; yet the perfect weapon now brings him no satisfaction for he sees in the atom bomb his own destruction as well as that of his enemy.

The ultimate benefits of nuclear energy may well surpass its present terrors, but the terrors are here now in awful dimension, and man must face them. He must pay this price for unlocking the wealth of the inner atom.

ATOMIC BOMB

This page, then, is about the atomic bomb. Nothing will be said here that is not either a certified scientific fact or a conclusion shared by the majority of the leading scientists, engineers and statesmen who have studied the matter.

As already explained, an explosive nuclear chain reaction spontaneously sweeps through a block of U235 or plutonium when the block is rapidly enlarged beyond a certain "critical" weight X. That weight is still a military secret; the official Smyth report vaguely suggests that it is more than 4 lb and less than 200 lb. Each piece of U235 in the dormant bomb must weigh less than X. At the desired instant of explosion the bomb mechanism assembles these pieces rapidly into a single piece considerably heavier than X.

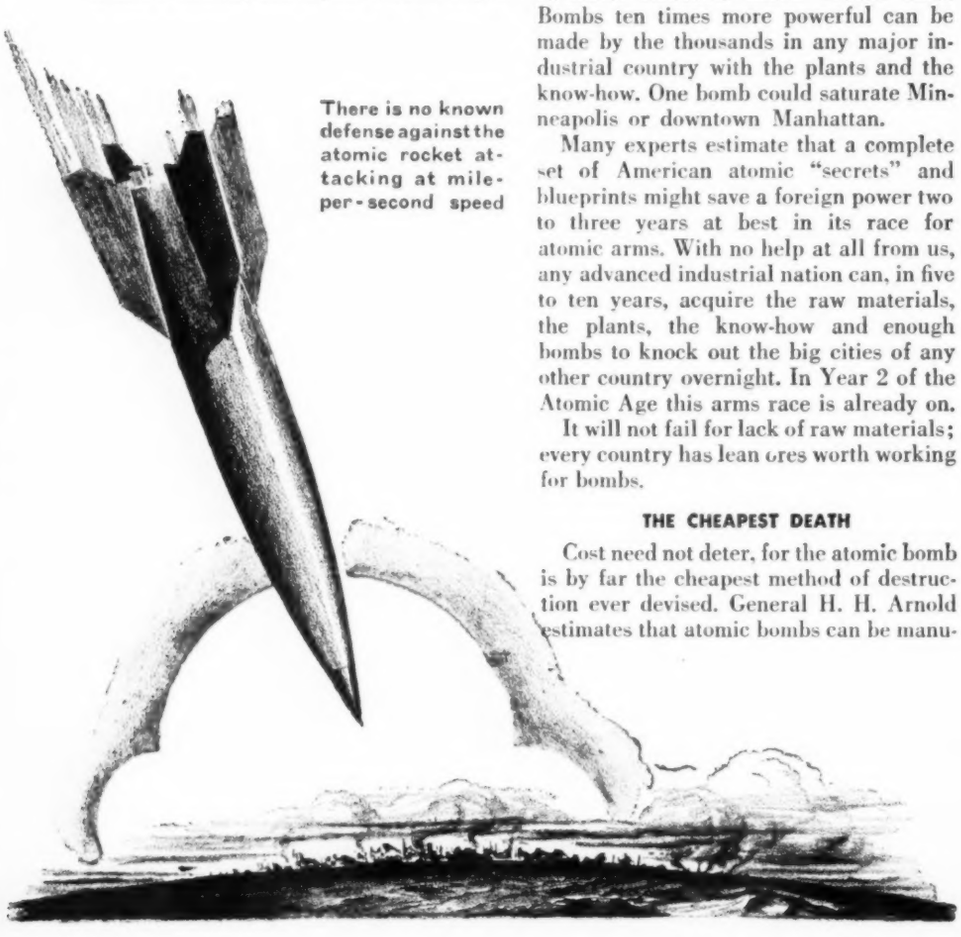
The explosion itself drives the U235 pieces apart, thereby quenching the atomic conflagration before all the atoms are split, so the bomb efficiency is far less than 100%. For each pound of U235 (or plutonium) atoms actually split, the bomb releases the energy of 1400 tons of coal.

This explosion is mainly ordinary heat at work in unprecedented concentration. Bomb metals become incandescent vapor millions of degrees hot. This, and the enveloping sphere of glowing air, radiate a blinding flash that chars human flesh at half a mile and blisters at over a mile. There is a destructive shock wave (sound) and a second-long hurricane of unimaginable force — the outrushing of the expanding heated air. Deadly neutrons and gamma rays speed out from the bomb.

A single atomic bomb killed about 100,000 at Hiroshima. Fewer died at Nagasaki only because the circle of potential destruction included much vacant land. Bombs ten times more powerful can be made by the thousands in any major industrial country with the plants and the know-how. One bomb could saturate Minneapolis or downtown Manhattan.

Many experts estimate that a complete set of American atomic "secrets" and blueprints might save a foreign power two to three years at best in its race for atomic arms. With no help at all from us, any advanced industrial nation can, in five to ten years, acquire the raw materials, the plants, the know-how and enough bombs to knock out the big cities of any other country overnight. In Year 2 of the Atomic Age this arms race is already on.

It will not fail for lack of raw materials; every country has lean ores worth working for bombs.



There is no known defense against the atomic rocket attacking at mile-per-second speed

THE CHEAPEST DEATH

Cost need not deter, for the atomic bomb is by far the cheapest method of destruction ever devised. General H. H. Arnold estimates that atomic bombs can be manufactured *and delivered* for less than $500,000 per square mile of destruction.

Don't be misled by the two billion dollars America spent on a project that dropped only two bombs on the enemy. New plants can be built at a fraction of wartime cost, and the investment spread over thousands of bombs, not just two.

NO DEFENSE

So the bombs can be made in ample quantity and paid for, but can they be delivered? The answer is: "Yes; by the time the bombs are ready they can be delivered anywhere and overnight." If the defenses of the target country are weak, piloted planes can get through in ample number. Ten percent would be enough.

For more effective delivery radio-steered pilotless planes and rockets can carry the atom bombs faster than sound. Such weapons will be almost untouchable by either antiaircraft artillery or manflown fighters.

Greatest threat of all will be the transoceanic rockets. The German V-2 rocket, which never once was stopped by Britain's defenders, points one way. It needs only transatlantic range (with atomic propulsion) and an atomic bomb in the nose. Forty-six feet long, loaded with 7500 lb of alcohol fuel and 11,000 lb of liquid oxygen, the V-2 of World War II rose 60 miles in the air and arced 200 miles in five minutes to deposit one ton of TNT in London.

Seeing so many strange things come to pass, the man in the street cannot distinguish between possible miracles and the impossible variety. From the very start of the Atomic Age he has been hoping for a "ray" that will explode the atom bomb far off. Competent scientists and engineers say that cannot be.

The only way to bring down a 3500-mile-per-hour rocket at a safe distance is to chase it with your own 4000-mph rocket. You can't win at this game often enough to establish ironclad protection.

The only specific defense against the atomic rocket known in Year 2 of the Atomic Age is to disperse all cities and put key industries underground. This would be very costly in time, money and national morale.

MORE AND BETTER BOMBS?

Some will ask whether the U.S., as the most powerful industrial nation, could not build more and better bombs and carriers than any other nation. Probably yes, but there is still no real security. If the "weak" opponent has enough atomic weapons to destroy us once, what advantage is there in being able to destroy him twice?

Shooting first could protect us now, but not after the world is atomically armed. If we were to destroy the enemy's cities, we would probably miss his well-concealed and protected bomb magazines and rocket launchers. A few minutes later he could return the atomic fire. In brutal simplicity, that is the picture of future atomic war. Everybody loses.

At this point one grasps at another straw: "If everybody is to lose who would be so foolish as to start an atomic war? And didn't the Germans refrain from using gas for a similar reason?" Possibly yes. It *may* work that way. But in a world atomically armed to the teeth some nervous finger *may* pull the fatal trigger.

ONLY ONE WAY OUT

Throughout history each new offensive weapon has called out its appropriate defense. But now the offense leaps centuries ahead in a single bound and the defense lies almost helpless everywhere, unless some technical protection, unknown as Year 2 begins, can be devised.

The situation is extremely dangerous. There is no clear way out except through some sort of international action first to stop the atomic arms race and, before it is too late, to hobble war itself.

Can it be done? Perhaps not, but there is no alternative except atomic chaos.

...so he faces the Atomic Dilemma...

THE NUMBERED statements that follow in somewhat logical pattern are too fateful to be accepted on anybody's say-so. Every reader should test them in the light of his own information and understanding.

The points below sum up the conclusions of the previous article — and these in turn reflect a great mass of thought and discussion among leading scientists, engineers and statesmen close to the problem. To an amazing degree they concur on both facts and conclusions. For authoritative statements of their line of thought, in detail not possible here, the reader should see the recent book, *One World or None.*

THE DILEMMA

Nations must either face the probability of an atomic World War III, which would surely be the most deadly in history . . .

***Or,* the experts propose, yield both atomic weapons and war potential to international authority backed by superior force.**

What the Experts Say

1. In five to ten years any major industrial nation can make enough atom bombs to destroy all the major cities of any other country overnight.

2. This assumes no "secret" information or other help from us.

3. The necessary uranium ores will be at hand.

4. The cost will not be too high.

5. The bombs produced can then be carried thousands of miles by bombers, or by atomically powered guided missiles moving faster than sound.

6. There will probably be no effective military defense against such weapons.

7. Dispersing cities, and putting key industries deep underground, will give some protection if accomplished in time, but at incredible cost in money and human discomfort.

8. In a world atomically armed, nations can probably protect their bomb stocks and rocket launchers from enemy assault.

9. If so, nation A can destroy the cities of any other nation B, after which B's rockets will destroy the cities of A. Shooting first will not win an atomic war.

10. This knowledge may not restrain the trigger finger of a suspicious power.

11. Having more and better atomic weapons than the other fellow won't help much if he has enough to destroy us. No use to kill a man twice or rebomb urban ruins.

12. Every nation is vulnerable in the Atomic Age, including the U. S. A.

13. National security will be impossible without (first) international control of atomic arms and (not too long thereafter) international control of all war potential, both backed by superior physical power.

14. If action to this end is long delayed, it may become impossible to halt the atomic arms race already started.

15. At best, the necessary degree of international control, with some real delegation of national sovereignty, will be a revolution in human affairs. It may prove to be humanly unobtainable at this time. If so, men and women everywhere must face the probability of an atomic third world war—by far the most destructive in all history.

In this atomic age no nation can be safe through its own unaided might

...and the Great Debate unfolds

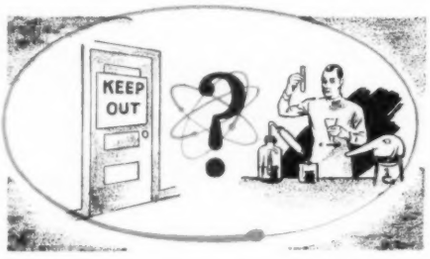
ATOM YEAR 1 has probably been marked by more debate on a single subject than any other twelve months in the world's history. Social, economic and political as well as purely technical issues have been pressing for realistic solution. Let us look at these issues and see where we stand:

CIVILIAN VS. MILITARY

Because the atomic bomb is the world's greatest weapon, the armed forces would like to control it. But because atomic energy can also be used for peaceful, beneficial purposes, civilian control seems equally essential. These conflicting viewpoints had their strong proponents before the Congress which finally reached a fairly satisfactory compromise in the Atomic Energy Bill of 1946, setting up a competent civil board with which the armed forces will have continuing liaison. As we go to press, just before Year 2 of the Atomic Age begins, this bill has passed the Senate, but there is still a question how rapidly it will be enacted into law.

PRIVATE VS. PUBLIC

Atomic energy is "too big" and "too hot" to be handled privately. It must be nationalized and internationalized. The questions are *how* and *to what extent*. Fortunately, as the "boxes" on these pages show, there are means that may attain reasonable safety against misuse of the atom, and still do so without public control of many "non-dangerous" applications.



SECRECY VS. FREE SCIENCE

Throughout the first year of the Atomic Age hot debate has raged around "keeping the secret of the bomb." To prevent potential enemies from making atom bombs some have urged a complete blackout of all phases of atomic energy — even of the scientific fundamentals of nuclear physics. Others have sought immediate and complete disclosure of all bomb "secrets," both scientific and technological. These have held that such information cannot be effectively hidden, that secrecy blocks progress and breeds wars.

A year of debate has brought the great mass of vocal opinion to this middle ground: (1) Ease restrictions on the exchange of basic physical knowledge. (2) Release for industry's benefit many of the devices and methods developed for the bomb project. (3) Hold tight to specialized information on atomic bombs and bomb-material production until international safeguards are fully operative.

DOMESTIC CONTROL AS PLANNED IN THE ATOMIC ENERGY BILL OF 1946

McMahon Committee Bill contains the following provisions.

Policy. Declares it the policy of the U. S. to develop and utilize atomic energy to improve the public welfare, increase living standards, strengthen competitive enterprise and promote world peace.

Organization. Establishes the Atomic Energy Commission (AEC) of five administrators to direct four divisions on research, production, engineering, and military applications—to work in liaison with three committees from (1) the armed forces, (2) outstanding civilians, and (3) joint Congressional representatives.

Production. AEC to own and operate (under management contracts with industry if deemed desirable) all facilities for the production of fissionable materials, such products to be distributed with their radioactive byproducts under license for private industrial and medical research.

Military Application. AEC to engage in development work and produce atomic bombs as directed by the President, to be delivered only on his order to the Armed Forces.

Industrial Utilization. Permits AEC to conduct research, design and manufacture equipment for atomic-energy utilization, license its use, produce and sell power obtained as a byproduct in the production of fissionable materials. Directs AEC to give widest safe scope to private initiative.

Control of Information. AEC to enforce a ban on the dissemination of restricted data that might be used to injure the U. S. or secure advantage to a foreign nation, yet to provide leeway for ultimately relaxing restrictions as future conditions warrant.

Patents and Inventions. No private patents permitted for production of fissionable materials or their utilization for military weapons, but AEC will justly compensate for such inventions, when made by private citizens. Patents for non-military applications may be purchased or condemned by the AEC only when public interest is affected.

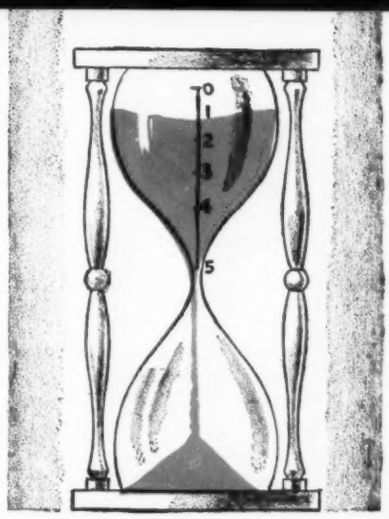
Appropriations. "Such sums as may be necessary and appropriate to carry out the purposes and provisions of the act" *plus* unexpended funds of the Manhattan Engineer District.

while Time runs out

NATIONAL VS. INTERNATIONAL

Born of nationalism, the Atomic Age began when three nations discovered a weapon that today gives them the greatest military power on earth. The prime question is: Shall the atom remain the servant of its conqueror, nationalism?

During Year 1 of the Atomic Age the Truman-Atlee-King declaration, the masterly report of the State Department's atomic consultants, and the U.S. representative on the United Nations Atomic Energy Commission, have all called for international control of atomic energy. Year 2 will start with no such control. This failure to decide and act is in part a natural result of the extreme difficulty of the problem and the obvious dangers of unwise decisions. Nations everywhere face a triple dilemma in this Atomic Year 2: the dangers of nationalism, the dangers of internationalism, the supreme danger of not being able to make any decision in time to meet the atomic bomb threat.



Leading industrial nations can produce atomic bombs in five years, competent scientists announced after Hiroshima. Already one year of the precious five has been consumed in debate without international action. Soon it may be too late to check the growing momentum of the atomic arms race.

INTERNATIONAL CONTROL AS PROPOSED BY THE U.S. TO U.N. ATOMIC COMMISSION

Baruch statement follows constructive path laid out by Atomic Consultants in "Acheson-Lilienthal Report."

The Plan. The U. S. has proposed that all nations band together to outlaw the use of atomic energy for war and to promote and harness its development for the benefit of mankind. To this end an International Atomic Development Authority would be set up, and to it the U. S. would turn over, at various stages of its organization, all atomic bombs, know-how, raw materials, facilities, and stockpiles of fissionable material. Thus IADA eventually would supersede national authorities on some matters and supplement them on others.

Owner and Operator. IADA would take over from national authorities or private ownership full management and control of all atomic energy matters that afford a possible threat to World security. These include:

1. Raw Materials—Supplies of uranium and thorium to be inventoried, controlled, and developed by IADA.
2. Facilities—IADA to control and operate plants producing fissionable materials and to own and control their products.
3. Research—IADA to undertake research and development on all aspects of atomic energy and to possess exclusive right of research on atomic explosives.

Private Initiative. Will have its chance to push forward the use of atomic energy for peacetime (non-dangerous) purposes. With IADA providing raw materials and carrying out necessary inspection, national and private enterprise may operate "safe" power piles, and produce and use radioactive isotopes for research, clinical and other applications. Radioactive isotopes produced by IADA also can be distributed for peacetime use.

The Mechanics of Safety. No plan is a certain guarantee against future atomic war. This plan should, however, prevent surprise attack with atomic weapons; for IADA is to buttress positive ownership or management controls with wide powers of inspection. Obviously, successful inspection rests on complete freedom of access or egress in any area.

Sanctions. At the heart of the plan lies the problem of penalty for violation — a matter for profound statecraft. To the U.S., one aspect of sanctions appears crystal clear: Here is an area where the veto right now held by the five great Powers must be redefined if it is not to be incompatible with the meaning and purpose of the proposed control.

TIMETABLE—ATOM YEAR 1

1. **July 16, 1945.** World's first atomic bomb detonated in New Mexico.
2. **July 26, 1945.** President Truman and Prime Minister Churchill issue Potsdam ultimatum threatening Japan's destruction if she continues.
3. **August 6, 1945.** Atomic bomb dropped on Hiroshima.
4. **August 9, 1945.** Atomic bomb hits Nagasaki.
5. **August 11, 1945.** Army releases Smyth Report on "Atomic Energy for Military Purposes."
6. **August 14, 1945.** Japan accepts terms of Potsdam declaration.
7. **November 15, 1945.** Truman-Atlee-King issue declaration of intention and procedures looking toward international control of atomic energy by United Nations.
8. **March 28, 1946.** State Department issues Acheson-Lilienthal Report on the "International Control of Atomic Energy."
9. **April 12, 1946.** Manhattan Engineer District announces program for experimental development of atomic power.
10. **June 1, 1946.** "Atomic Energy Bill of 1946" passes Senate unanimously, is referred to House of Representatives.
11. **June 14, 1946.** First meeting of United Nations Atomic Energy Commission (Bernard Baruch as American member). Manhattan District announces availability of radioactive isotopes for research use.
12. **July 1946.** Joint Army-Navy tests of atomic bombs at Bikini.

...but if Man Masters Atom...

IF MUTUAL DESTRUCTION by the atomic bomb can be avoided, the first century of the atomic age will bring immense advances in scientific knowledge, health and living standards. Already many prospective benefits can be outlined, but those we can neither foresee nor suspect may be even more important.

This prediction is grounded in scientific experience; the most fundamental discoveries have always been the most fruitful. The study of molecules gave us chemistry. Faraday's experiments with electricity and magnetism are the foundation stones of the great electrical industry. Can one expect any less from an understanding of the heart of every atom?

BENEFITS

Atom-splitting benefits clearly visible today fall mainly in three classes: (1) heat and power applications of the uranium piles; (2) general industrial applications of equipment and methods originally developed for the bomb project; (3) chemical, biological and medical uses of the "tagged atoms" (radioactive isotopes) now abundantly available from pile operation.

It is now evident that the energy yield of the U235 in an atomic pile can be multiplied many times by returning to (or leaving in) the pile the plutonium and possibly the U233 produced respectively from the U238 and the thorium in the pile. This is an indirect way to "burn" inexpensive U238 and thorium, and thus greatly extend the supply and reduce the cost of atomic fuels.

POWER APPLICATIONS

Although present piles run at low temperatures, it is certain that temperatures high enough for the efficient operation of steam and gas turbines will be attained. Already an experimental atomic power plant has been ordered. Atomic power for certain remote installations (say, for heating Arctic airports) may not be far off.

In five or ten years uranium piles will be driving a few experimental ships and submarines. In 20 or 30 years uranium may begin to compete widely with coal as a fuel for suitably situated large central heating and power plants. The 50-ton minimum weight of shielding rules out nuclear power for automobiles and small piloted planes.

SPECIAL USES

Some day ultra-high temperatures from splitting atoms will be used for special industrial operations on metals and other materials. Even the dread atomic bomb might easily serve peaceful ends — blasting lakes in deserts, changing the course of rivers, leveling mountains.

INDUSTRIAL BYPRODUCTS

The special industrial equipment and methods developed for the bomb project will find hundreds of important uses — mostly for purposes unrelated to atomic energy. These developments include pumps with neither seals nor leaks, leak detectors of amazing sensitivity, ultratight welding, a portable mass spectograph for quick and automatic gas analysis, new ways of handling corrosive and poisonous materials, new diffusion barriers for the separation of gases and of petroleum products.

TAGGED ATOMS

Yet more important than any of these, in the long run, will be the hundreds of radioactive isotopes now available as by-products of pile operation. Chemically indistinguishable from the ordinary forms of the elements, these isotopes serve as tagged atoms or "spies" if mixed with common stable atoms of the same species. They "fly with the flock," and can later be identified as surely as banded birds. With these amazing tools of research, the course of any element or compound may be traced through the bodies of men, animals and plants. Similarly, tagged atoms may be used in studying the course of many kinds of industrial and chemical operations.

BIOLOGY AND MEDICINE

A suspected hyperthyroid condition can be diagnosed by feeding the patient a minute measured amount of radioactive iodine. The click of a "Geiger" counter placed on the patient's neck will tell (1) what percentage of the swallowed iodine concentrates in the thyroid cells and (2) how rapidly that concentration is accomplished — giving a definite indication of the state of the gland.

In similar fashion the radioactive isotopes of hydrogen, oxygen and carbon will trace out the intricate transformations of carbohydrates and proteins in the human body. Radioactive phosphorus will explore the bones. Radioactive iron will show how and where blood cells are formed. Radioactive sodium will time the circulation of blood.

USES IN INDUSTRY

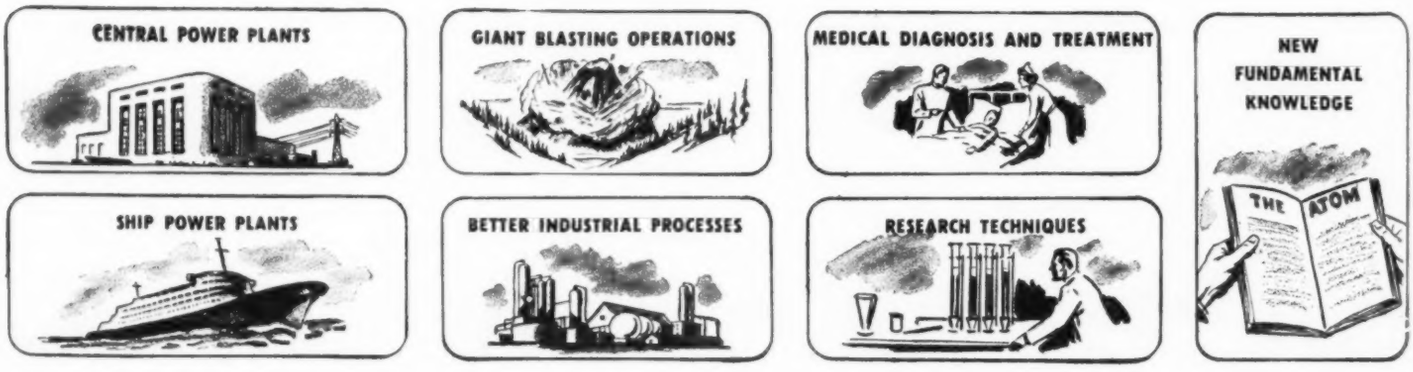
In chemistry the radioactive isotopes will speed the understanding of metallurgical and organic reactions. In industry they will measure flow, detect leaks, and do other useful work.

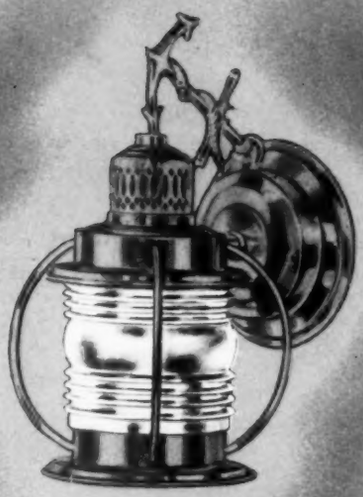
Meanwhile the uranium piles will be manufacturing certain radioactive isotopes that can serve as cheap but effective substitutes for high-cost medical radium.

KNOWLEDGE COMES FIRST

It is already clear that the chief benefits of atom splitting will come first as new scientific knowledge rather than as new engines and gadgets. But in the long run man's new understanding of the inner atom will enrich the whole range of human activity. This has always been the case with less fundamental discoveries in science. It can hardly be less with this most fundamental discovery.

ATOM SPLITTING WILL SERVE MAN IN:





M-822

M-1016

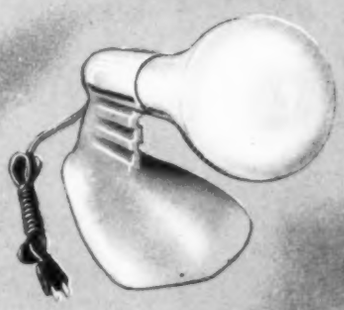
SMART *appealing designs*

M-218 Fluorescent Pin-Up

new merchandising opportunities in lighting fixtures . . . for distributors who keep pace with developments in Moe Brothers' complete program of leadership

These modern, attractive residential lighting fixtures are skillfully designed to harmonize with the most carefully selected home furnishings.

They are, however, more than just items in a catalog. They are visible evidence of a far-reaching program which makes lighting fixtures—as represented by the Moe Brothers' franchise — a more important part of your business than ever before. This program is backed up by the design, engineering, and manufacturing resources — the merchandising ideas — the quality standards that are indispensable to success in the competitive era just ahead.



M-77 Lamp Holder

Shown here are two items of a group of merchandising specialties intended for over-the-counter sales. Brilliantly designed, well-made, inexpensive. Their appeal to the mass market is obvious.

TURN THE PAGE

Moe Brothers back you up

. . . with the resources, facilities, and ideas which are necessary to make lighting fixtures a more important and profitable part of your business

The electrical trade has long needed a leader in lighting fixtures — in the medium-price bracket where good volume combines with a sufficient unit of sale to give you the most satisfactory total profits.

Building on their more than 25 years of experience in manufacturing and merchandising lighting fixtures . . . on more than four years of war production experience, calling for new standards of manufacturing efficiency and quality control . . . on research, study, and consultation with leaders in all phases of electrical merchandising from coast to coast . . . Moe Brothers now offer to qualified electrical wholesalers a program which measures up to this opportunity.

Sales of Moe Brothers' regular catalog line are confined to a limited number of electrical wholesalers — selected with the same analytical consideration of prestige and performance that you apply to the selection of your principal lines and sources. A few distribution centers are still open. We invite your inquiry. Write or telephone us today.

MOE BROTHERS

MOE BROTHERS *Manufacturing Company*

FORT ATKINSON, WISCONSIN

L-2

ELECTRICAL WHOLESALING News

Copper and Materials Improve After Industry's Worst Month

Settlement of strikes in copper mining-smelter industry and higher prices make outlook brighter for electrical manufacturers

THE shortages of critical materials necessary in the manufacture of electrical products reached a peak during the month of June, with copper practically non-existent. However, close observers predict that July and the remaining months in 1946 will bring increasingly brighter days for the electrical manufacturing industry.

The strikes in the copper mining and smelting industry which gradually had brought the production of electrical products almost to a dead stop, have been largely settled. This fact, in addition to the increased prices for copper recently granted by OPA are expected to stimulate production, thus making the outlook for July and the following months better than at any time since the strike wave started. The turn for the better will not be apparent immediately but at least the upswing has started.

Such items as steel, copper, brass, bronze, silver, lead, nickel, mica, porcelain, tin, tungsten, wood and cotton were listed by the electrical industry as much-needed but impossible-to-obtain materials in June. Copper was listed as the most serious threat to production for the electrical manufacturing industry.

Lead may also soon register an upswing in production as the result of higher prices and the resumption of smelting operations. Silver users will await the final result on the Post Office Appropriations Bill which contains a "rider" setting higher government prices for silver.

The electrical manufacturers who depend on wood for part of their finished product will note with interest an increase of ten percent in employment over a year ago in the lumber industry.

However, the production of critically short materials will not be sufficient to meet the demand for some time. The tremendous backlog of orders on file with most manufacturers will require many months to fill. Recently released government figures showed that orders for fractional horsepower motors in March totalled 3,180,780 while only 1,485,548 units were produced. The total of orders on hand for these motors was brought to 35,293,547 at the end of March.

Following a poll taken at a meeting of the Board of Governors of the National Electrical Manufacturers Association, President R. L. White revealed that the acute shortages of copper which have been gradually slowing down production in the electrical manufacturing industry would reach the point of forcing widespread plant curtailment and shutdowns commencing the latter part of June.

Mr. White further explained that the shutdowns would result in an indefinite postponement of the manufacture of many electrical appliances and equipment which depended upon copper for component parts.

From 50 to 60 percent of the copper mined is ultimately required by the elec-

WITH COPPER MINES such as this one in Utah back in operation following strikes the copper situation should ease considerably in the next few months. OPA price increases also are aiding in boosting production of this precious metal for the electrical industry.

1 SALE SOLVES 3 OF YOUR "BUILDING PROBLEMS"

Today's building problems aren't all linked to the housing shortage. Many a business is just as vitally concerned with building up plans for increased sales, better service, and valuable good will that play such an important part in its profit picture.

This is where G-E wiring devices can help you — now. They boost your sales because customers just naturally ask for products that bear the General Electric name . . . the name that means quality and leadership in the electrical field.

Good service is made easier, too, with G-E wiring devices. They are easy to install; they are designed for ready use with other components of wiring systems; and they insure the long, useful life on the job that cuts maintenance and replacement costs to the bone.

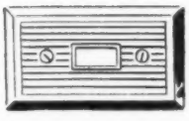
Good will? That's like money in the bank when you can offer the *full line* of G-E wiring devices. Every product essential to the needs of your customers can be supplied. When you sell G-E wiring devices, you'll be building good will and inspiring confidence that will last for years to come.

If you would like more information on G-E wiring devices, write Section D2-721, Appliance and Merchandise Dept., General Electric Company, Bridgeport, Conn.

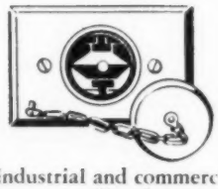
GENERAL ELECTRIC

...when you offer

WIRING DEVICES



G-E wiring devices are built and inspected with unusual care, to assure the perfection of detail that helps make installation easy.



For industrial and commercial installations, as well as homes, use of G-E devices is convincing evidence to the customer of a long-lasting job throughout. G-E wiring devices are available at local General Electric Merchandise Distributors.

trical manufacturers and the companies which do not depend directly upon the use of copper will suffer because of diminishing orders for parts and accessories they normally furnish the large manufacturers if shutdowns are widespread, Mr. White said.

Results of the poll among the companies represented on the Board of Governors of N.E.M.A. showed that wire and cable manufacturers were suffering the most from the copper shortage, with the makers of electric motors and transformers next on the list.

The Board of Governors estimated that the government has a copper reserve of about 400,000 tons. This is hardly enough to help the electrical industry since only about 50 percent is electrolytic copper and probably not more than 100,000 tons is in a form that can be melted down into bars for use by the wire and cable manufacturers.

Manager Appointed For Westinghouse Branch

LITTLE ROCK, ARK.—J. A. Hunter, who has represented the Westinghouse Electric Supply Company in Arkansas for 18 years, has been named manager of the new branch office and warehouse that is being opened at 119 Sherman Street, this city.

He is a member of the Little Rock Club and secretary of the local chapter of the American Institute of Electrical Engineers.

SIXTY APPLIANCE SERVICEMEN attended a service school in Tampa held by Raybro Electric Supplies, Inc., Florida wholesaler. Three schools were held for franchised dealers of Raybro in Jacksonville, Miami and Tampa.

Florida Wholesaler Holds Service Schools for Dealers

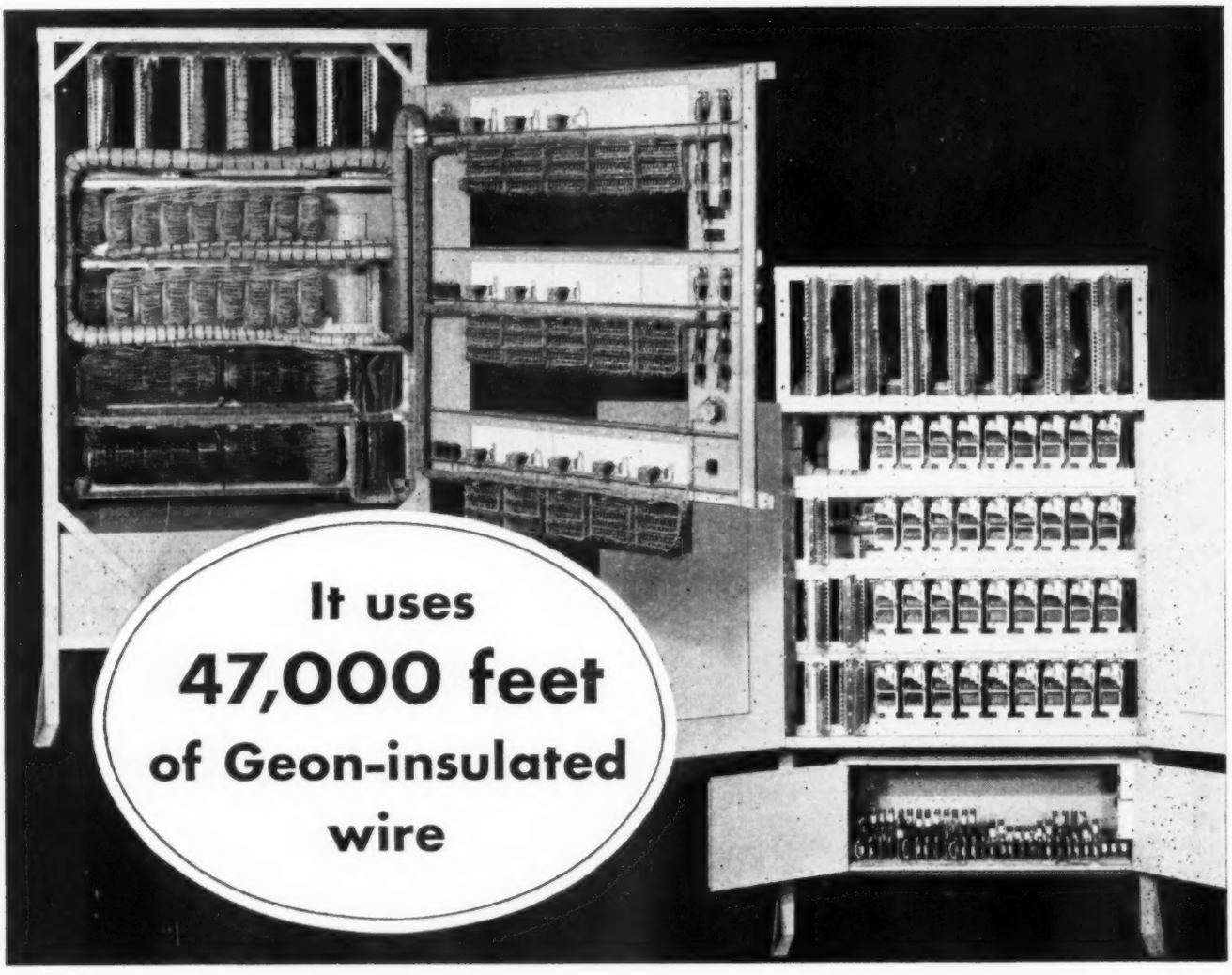
A series of three major appliance schools were recently completed by Raybro Electric Supplies, Inc., Tampa, Jacksonville, Miami and St. Petersburg, Florida, for its franchised dealers. The purpose of the schools was to better equip the dealers in the servicing of Raybro's line of major appliances.

W. T. Brown, merchandise service supervisor at Raybro, conducted the classes. The first school was held in Tampa, April 29, 30 and May 1st, and had sixty dealer-servicemen present. The second school, held in Miami on May 6, 7, and 8, had twenty-five dealers in attendance. The final school was held in Jacksonville on May 13, 14 and 15, with forty dealer-servicemen present.

In each of the three schools Monday and Tuesday was devoted entirely to Gibson Refrigeration Service. Wednesday morning was given over to the Gibson range service and the afternoon to Clark Water Heaters and ABC Laundry Equipment Servicing. Each school was concluded with a banquet on the final evening. The classes not only covered theory and instruction but also, actual demonstration and servicing of the various units.

About 95 percent of all Raybro's dealers were represented at the three service schools.

GRADUATION DINNER—271 enrollees in the Basic Sales Training Course, sponsored by 29 wholesaling concerns as members of the Philadelphia Electric Association, received certificates of merit at a dinner which concluded the course. A total of 394 were enrolled for the course which was prepared by the N.E.W.A. and Edison Electric Institute.



Same type insulation is revolutionizing home and industrial wiring

THESE front and rear views of a Rotary Switch and Relay Bank Rack—that's what Western Union calls it—give some idea of where all the wire goes. But they don't tell why so much Geon-insulated wire is used in machines like these as well as other equally complicated instruments designed and built by Western Union engineers.

Most important, of course, are the excellent electrical properties of insulation made from GEON. They permit a thinner coating of insulation. In instrument wiring that means that the assembly engineer has more room for doing his intricate job. In building wiring it means more conductors per conduit or smaller holes to be drilled.

But insulation made from GEON offers more than this. In all types of wiring it's easier to handle because it's smooth and non-sticky. It's easily identified because of the brilliant, permanent colors. It's highly abrasion resistant—pull it around sharp corners without fear of tearing. It resists water (GEON compounds, of course, are Underwriters approved for TW and other type wires); it resists oil and greases, acids and most other chemicals, sunlight and ozone, flexing, heat and cold, and most other normally destructive factors.

The next time you order wire—for manufacturing, home or industrial wiring—be sure to specify wire insulated with GEON now being made by leading wire and cable manufacturers. Or for more information please write Department T-7, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. In Canada: Kitchener, Ontario.

Geon
Polyvinyl Materials

B. F. Goodrich Chemical Company

A DIVISION OF THE B. F. GOODRICH COMPANY

Truman Veto Bomb Sinks OPA But Business Saves OPA Prices

"Hold the line" becomes cry of business leaders as industry commences operating without price control

BIKINI Lagoon was not the only place in a turmoil on July 1. When President Truman vetoed the OPA extension bill, he released a less deadly bomb but one which has had more repercussions and caused more discussion than the atom bomb event.

The battle which ensued in Washington following the President's action has found the electrical industry, along with the rest of the industrial and commercial world, sitting on the side lines and wondering which way to move.

In the face of a record number of telegrams and letters from constituents back home the House of Representatives voted a 20-day extension of the OPA during which time a new bill could be written. However, the Senate apparently does not intend to vote an extension or a new OPA bill until it has had time to observe business operating without price controls. If prices skyrocket the chances are that an immediate extension of the OPA will be passed with a renewal of price controls for a year to follow.

Throughout all industries the cry today is "Hold that Line," and from all appearances prices in general are going to be held at or near to the OPA levels at least for the month of July. The electrical industry is proceeding with caution, and like the Senators, its executives are waiting to see what is going to happen. If the OPA is really dead, never to be revived, many manufacturers will adjust prices to cover their increased costs.

First reports, however, show that many manufacturers do not believe it necessary to increase prices at this time, and until their costs force them to, they will keep the OPA price levels that existed prior to its termination. Here and there among the reports following the decontrol of business are notices of manufacturers lowering prices in order to hold the line, and a few have increased their prices.

Since holding to the OPA levels seems to be indicated for at least the next few weeks, electrical wholesalers will be interested in the following orders which were released by the OPA in its last days.

Distributors were given a break by being allowed "historical margins" under an order which increased prices 13 percent over 1941 for manufacturers and distributors of power switchboard equipment, such as knife and enclosed switches and circuit breakers. Although industrial users are the principal purchasers of the equipment, small panel boards and circuit breakers are installed in all buildings where electricity is used.

The OPA order stated that because distributors' margins for this type of equipment appeared low in comparison with margins historically taken on similar equipment, distributors would be permitted to increase their existing ceiling prices by the same percentage taken by their suppliers under the order.

The products affected and percentage increase allowed by the OPA order were as follows: For knife and enclosed switch products including parts, current carrying capacity 100 amperes or less, 15 percent; for those with current carrying capacity of more than 100 amperes, 10 percent; small air circuit breakers, panelboards and distribution boards, busways, busway plugs and connectors, busway fittings and busway trolley type collectors, 10 percent; enclosed branch circuit cutouts, including enclosing cabinets, 15 percent.

Another late order issued by the OPA granted a second interim price increase averaging about 11.3 percent over present maximum prices to manufacturers of armored cable.

Other orders for price increases released by the OPA just prior to its demise included an increase for manufacturers of all power-operated warm air furnace fans and blowers and attic ventilating fans. Also qualifying for the increase were exhaust fans and blowers, 24-inch standard diameter and smaller, designed to be built into a building. The actual price increases allowed were as follows: For the specified fans and blowers, when furnished with a power unit of less than one horse-power, 14 percent; for the specified fans and blowers when furnished with a power unit of one horsepower or over, 9 percent.

A 19 percent increase in the base prices of electrical industrial control products was granted and also, an interim price increase of 15 percent for manufacturers of portable electric power driven tools. The 19 percent increase applied to the following electrical industrial control products: contactors, drum switches, some types of relays, all products listed in the Industrial Control Section of the National Electrical Manufacturers Association Manual, Volume 14, "Products Scopes of NEMA Subdivisions as of January 31, 1946."

The above increases are of interest in view of the general business policy to hold

(*Continued on page 92*)

THESE THREE GROUPS just weren't ready for our N.E.W.A. convention section in the last issue. However, they were there! Right photo: front row, B. D. Toney, Decatur Elec. Sup.; L. Morrow, Plymouth Rubber Co.; J. Morgan, Mfrs. Agt.; W. Bieringer, Plymouth Rubber Co.; O. Frankenbush, Hawkins Elec. Co.; back row, R. Hadley, Union Supply & Elec. Co.; B. S. Forester, Forester Equip. Co.; R. R. Hill, Hawkins Elec. Co.; B. G. Tonquest, LaSalle Elec. Sup.; A. Wilkinson, Union Sup. & Elec. Co. Center photo: A. P. Tower, B. M. Tower Co.; B. Singer, Beacon Light & Sup. Co.; J. L. Shannon and Henry J. Morton of Henry J. Morton Associates; J. M. Rosen, Grand Light & Sup. Co. Right photo: L. J. Snapp, J. G. Nordale, both of Snapp Elec. Sup.; J. G. Gorke, Gorke Elec. Co.; A. A. Sommer, Bussmann Mfg. Co.; S. A. Cohen, Standard Elec. Co., Inc.; J. Kurzon, Joseph Kurzon, Inc.

A 125-Million Units Market Waits That Provide Protection in Plants,

By H. G. Clum*

Bactericidal lamps prevent mold and protect meat from spoilage.

ALERT electrical wholesalers, men with their ears to the ground and their eyes on new markets, have seen a great force forming, a great new opportunity for profit to themselves and protection for their customers. They've seen the growth of a great new consciousness on the part of hospital and school executives, of food and drug processors, of theatre and hotel operators and of the public in its stores and homes, a consciousness of the tremendous losses in money, man hours and maximum health caused by air-borne bacteria.

Among lamp and fixture manufacturers too, the men who have carried on the long term researches with ultraviolet bactericidal energy and the designers who have developed long lines of new fixtures for the application and control of bactericidal rays, great new plans and programs are forming. Good energy-sources, good bactericidal lamps already were on the market before war began. Fixture manufacturers had finished their early experimental work before war-need diverted most of their production to hospital, cantonment, submarine and similar channels.

Bactericidal units irradiate upper air to prevent cross-infection and incidence of air-borne bacteria in laboratory. Photo supplied by author.

Market research men, studying potential need and attempting to predict probable demand for bactericidal lamps and fixtures, have reached some very interesting guess-timates. From statistics available to everyone, when they figure minimum protection for both personnel and products, they found that potential need totaled more than 4,434,000 bactericidal lamps in hospitals, another 420,000 in the offices of doctors and dentists, more than 4,298,000 in schools, with literally millions more required for the adequate protection of theatres, hotels, offices, stores, industrial plants, food processing and packaging plants, meat markets, locker plants, homes, farms and other similar establishments. Potential demand in great groups

To Be Sold on Bactericidal Lamps Hospitals, Schools, Offices, Homes

Treatment of air by bactericidal units in offices cuts illness from respiratory infections to an absolute minimum. Millions of fixtures and lamps will be required to furnish this protection to office personnel.

of natural markets reaches the staggering total of 125,890,000 bactericidal lamps. There is also a need for almost as many fixtures.

Some foresighted and forehanded manufacturers, recognizing their need for the protection of their products as well as their personnel, have already installed ultraviolet equipment, installed it long enough ago so that results are apparent and measurable. So it is at the E. W. Rose Company in Cleveland, makers of Zemo, a remedial ointment and liquid used in great quantities in the island campaigns in World War II. Even in a modern plant like the Zemo factory, workers get colds, bronchitis, influenza and a whole host of respiratory infections from airborne bacteria and products may

To free area from air-borne bacteria and viruses, bactericidal units are placed over bottling and labeling operation. Photo supplied by author.

Bactericidal unit installed to prevent contamination of products and protect health of personnel. Photo supplied by author.

Milk cans in this modern dairy are given ultraviolet treatment with bactericidal unit before filling. Cover photo and photo below by Westinghouse.

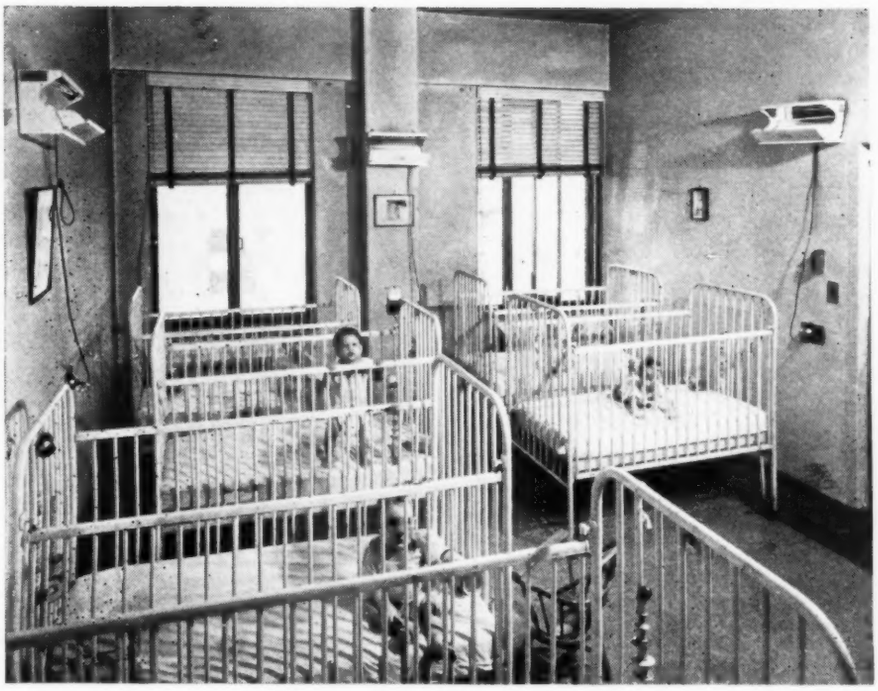
Jars of ointment are filled and pass slowly through hooded conveyor system where they are sterilized by ultraviolet action. Photo supplied by author.

often be contaminated by air-borne bacteria and the spores of mold and other fungi.

To prevent contamination of his products and to protect the health of his employees, E. W. Rose, president of the company which bears his name, installed the ultraviolet bactericidal protective system shown in accompanying pictures.

The process of manufacturing Zemo begins on the third floor of the plant at 1750 East 27th Street. Here materials not only are carefully weighed, measured and compounded, but are protected by the ultraviolet unit which appears in one picture. In the laboratory shown in illustration where a continuing series of tests always is in process, other bactericidal units irradiate the upper air to prevent cross-infection and the incidence of air-borne diseases and make certain that samples tested are free from contamination by air-borne spores and fungi. Air, in constant circulation, carries past the bactericidal units often enough to accomplish the equivalent of 100 complete air changes per hour.

From the mixers of the third floor, the product passes along to the processing plant on the second floor. Here a modern conveyor



Additional protection is furnished babies in this orphanage by ultraviolet equipment installed high on the walls.

system has been hooded to house the bactericidal lamps needed to irradiate the packaged product. The third of our illustrations shows a series of staggered flanges which slows the passage of the product until it reaches the end of the conveyor system shown in the fourth Zemo picture. The jars of ointment are hot-filled and sterilized by ultraviolet action before the tops are put on.

Zemo liquid is handled in another section of the processing plant. Here too, freedom from air-borne bacteria, viruses and spores is assured by the use of upper air irradiation. In a combination operation for bottling and labeling, just above and behind the cage which puts packages at the operator's hand, is a suspended bactericidal unit to free the area from air-borne bacteria.

From the processing plant on the second floor, the product goes to a shipping room on the street level. The street floor, too, is protected by ultraviolet units in the principal offices.

Mr. E. W. Rose assured our reporter that, "despite adverse climatic conditions in many of the areas into which we have recently shipped Zemo ointment and lotion, there has been no evidence of contamination.

"Ultraviolet equipment has not only protected our product, but our personnel has lost an absolute minimum of time as the result of respiratory infections. Our bactericidal installation, which has been in operation for more than a year and one-half, has proven not only efficient but extremely economical."

The E. W. Rose Company, although it is a fine example of planned protection as well as efficient production, is but one of thousands of similar manufacturing operations from the Atlantic to the Pacific, a single example of the tremendous opportunity represented by the development of ultraviolet bactericidal equipment. Today, a whole series of new markets await the men who plan to sell protection against air-borne bacteria.

Nor are these markets new. They are the very ones in which wholesalers and their salesmen are working now. Many of the lighting customers who are sold and serviced every day already recognize their need for and the advantages of ultraviolet equipment.

**General Sales Manager*
Art Metal Works

Bactericidal units mounted on the walls of this well-equipped Chicago parochial school protect the children from many respiratory diseases.

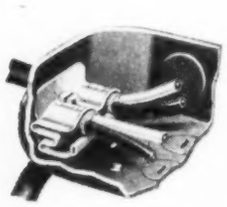
"Betcha don't know who Raco is!"

Of course *they* don't know that Raco is a trade-marked line of All-Steel-Equip Company . . . a complete line of steel switch boxes and outlet boxes. The profit line that has won the approval of salesmen and wholesalers throughout America.

WHY YOU, TOO, CAN "RELY ON RACO"

You can rely on Raco to be the clean line. No dirt or grease . . . keeps its smooth, attractive appearance! And Raco products are packaged. You can rely on each product coming neatly packed in protective cartons . . . with readable index showing number, quantity and finish.

You can also look for uniform standards. The same exacting standards are used as in other precision products that All-Steel has been manufacturing for more than 33 years. Remember, the Raco • All-Steel line is *sold nationally through wholesalers only.* Look for the Raco trade-mark . . . it signifies the quality line, the line you can "rely on."



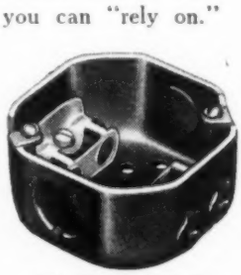
DO-21-N-3 3½" dia.
DO-16-N-3 4" dia.

Use Raco clamp type boxes to solve many of your connector worries.

DO-21-N-3, 3½" dia. is widely used with non-metallic cable.

DO-30-N, 3½" dia. is the perfect box for use with "BX."

ALL-STEEL-EQUIP COMPANY, INC.
300 Kensington Avenue, Aurora, Illinois



DO-30-N 3½" dia.
DO-31-N 4" dia.

RACO • ALL-STEEL • PRODUCTS
SWITCH BOXES • OUTLET BOXES

You Can Sell More Sound Systems With This Unique Job Your Pattern

Many industrial establishments are urgently in need of communication systems that have the obvious advantages that were achieved in this unique installation. Solving such problems for a plant manager makes business now and in future

By Arthur W. Hooper

AT its Long Island City, New York terminal, the Railway Express Agency recently installed a unique two-way public address system, which among other things, will enable it to rush to electrical wholesalers those long-awaited shipments of electrical products that are so urgently needed to fill the empty stock shelves. And further, the freight agency now is better prepared to speed your deliveries that must go by rail to retailers and customers beyond reach of your trucks.

Not only is the installation interesting because of what it is going to do in accelerating the delivery of your orders and increasing the efficiency with which shipments are handled at the freight station, but also, it is interesting as a very fine electrical job and further behind the scenes as an example of what a good selling job can be.

The Installation

Throughout the terminal forty-two beam-paging horns have been placed at strategic locations. Interspersed among the horns are twenty-five "hanging" microphones. This arrangement allows a control station to direct operations and receive replies from almost any place in the terminal. A central control station, properly called the "crow's nest," has been set up and from here the supervisor on duty can direct all loadings, unloadings and relay any information

Pete Sweeney, assistant agent at the Railway Express terminal, reports to the control tower by means of one of the hanging microphones. Microphones were hung from the ceiling by a pulley arrangement to prevent interference with the passage of trucks and other freight carriers.

necessary to the tracks where the actual operations are taking place.

A second set of master controls have been installed in the agent's office thus allowing orders or inquiries to be issued from there when necessary. The control panels on both master sets contain a red light which remains on when the microphone is in use. In this way "double-talking" over the system is avoided.

The main control station contains the transmitter, a Stromberg-Carlson No. 21, 50-watt amplifier with four mixing circuits for master microphones and two master output booster circuits.

Three Miles of Wiring

About three miles of wiring was used to install the system, of which 10,000 feet was armored cable. The McKee Electric Company, New York, designed and assembled the equipment for the Acme Telephone Engineering Co., who made the installation.

In tests made before assembling the system, the McKee Electric Company found that armored cable was the best to prevent the interference caused by the 11,000-volt high tension power lines and electric locomotives that enter the building. The noise level in the terminal reached 95 decibels or the equivalent of a screw factory.

For connecting the paging horns, the engineers used telephone bridle wire in pairs. For the hanging microphones they used No. 18 copper shielded twisted pair wire.

The terminal is constructed with all clear platform space to facilitate the handling of packages and trucks. Because the roof is suspended, the hanging microphone had to be used. The microphones are hung by means of a pulley arrangement weighted on one end by a sandbag. A venetian blind cord, tied to each microphone, hangs down about the height of a cord for a common household ceiling fixture.

When a call or reply is to be made the operator pulls the mike down and speaks, first pushing a button on the top of the mike. The sound-powered microphones such as those used aboard Navy ships, commonly called battle phones, were found to be the most suitable because of their rugged construction and good quality.

Reports are received every hour at the control tower from foreman on the platforms as to the condition of the terminal. The advantages that the Railway Express Agency has gained can be used by the smart salesman as powerful argument in selling sound systems.

By using the new system the foreman at each of the six tracks and other areas reports to the control tower each hour the condition of his particular section. The main office in New York City can pick up a phone at any time and call the control tower or agent's office and find out the condition of the terminal at any moment.

Speeds Operations

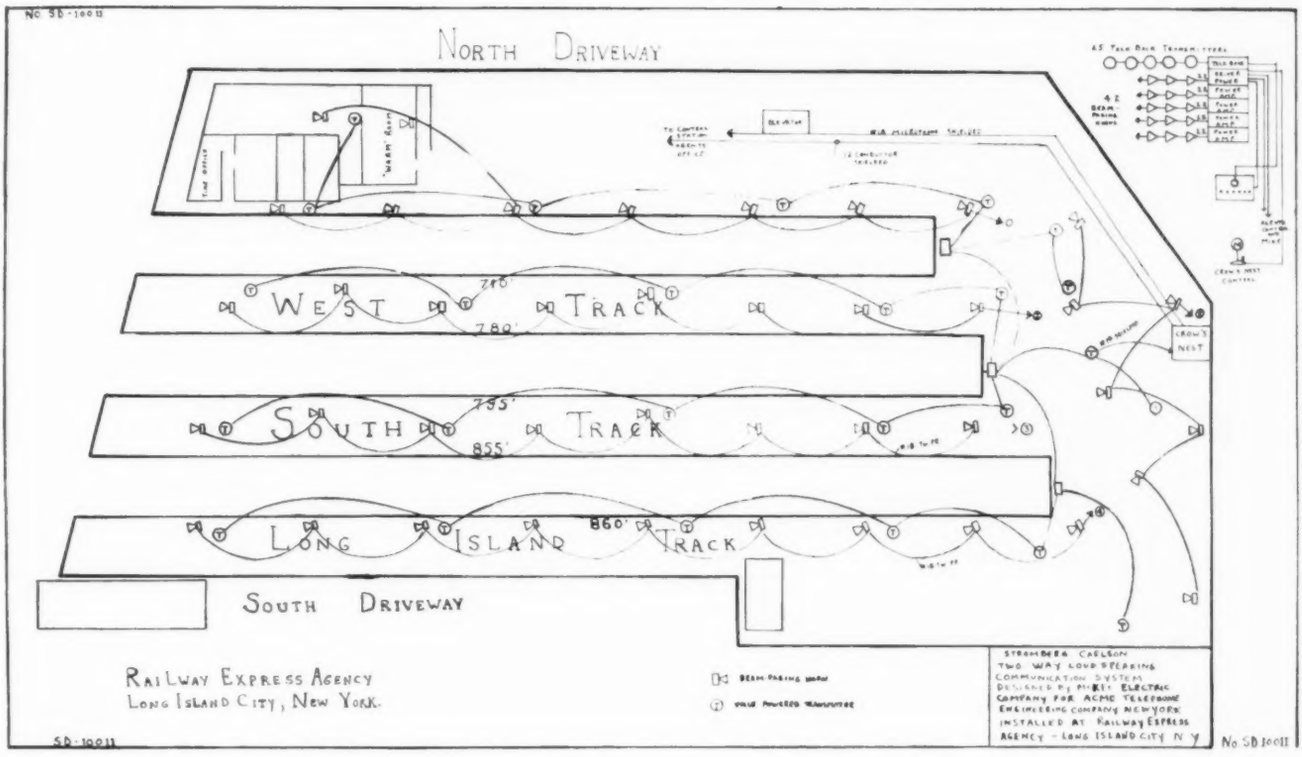
Another advantage to the system, and a problem that the agency frequently encounters, is the locating quickly of a particular shipment or article. With the aid of the sound system a shipment can be checked on, almost while the inquiring party waits on the phone.

As stated, the above represents more than just a good installation designed to answer the problems of a freight concern—it represents a wide-open field for large sales. The Railway Express Agency has carried on its work at the Long Island City terminal for years without the two-way sound system. But the company has long realized that something was needed to speed up the thousands of orders necessary in the handling of freight shipments. Messengers were formerly used when an order to reroute a shipment or locate a particular package was necessary.

Some 90,000 to 120,000 express packages are handled at the Long Island City terminal every day. The sound system will be used to expedite the loading and unloading of these packages from as many as 185 motor trucks and 75 railroad cars simultaneously. The terminal has six railroad tracks and four loading platforms, of which the longest is a quarter of a mile in length and the shortest 800 feet.

To facilitate handling of the express shipments the terminal is equipped with a system of overhead chain conveyors. These conveyor belts are powered by 20 horsepower motors and pull the double-decked trailers along the platforms. As the trailers pass by the various stations, the sorters remove packages or place shipments on the trucks.

Another great advantage to the



Three miles of wiring was used in connecting this two-way sound system at the Long Island City, New York terminal of the Railway Express Agency. This job represents not only an excellent electrical installation but a fine example of good salesmanship as well. Plant managers will be interested in the efficiency and speedy operations made possible by the sound system.

sound system is that emergency messages can be relayed and an announcement made to the terminal in a matter of minutes.

Sale of System Worthwhile

The management at the Railway Express Agency had long realized the need for a better communications system. Telephones just wouldn't work since they would require booths or poles and thus would interfere with the passing trucks and other freight carriers. The big problem was to plan how a system could be installed that would not take up valuable space on the platforms, and that took salesmanship.

A two-way sound system obviously would be the answer. Perhaps the average wholesaler can't supply the whole job from stock because an installation of this size requires many materials from various sources. But a good salesman can sell many jobs of this type. Sound systems have proven their worth today and many concerns, small and large, need the added efficiency that a sound system brings wherever one is in operation.

Inside the "crow's nest" the supervisor keeps watch on the platforms below where loadings and unloadings are taking place. By means of the microphone and receiver box at his left, the supervisor can contact and receive replies from any point in the terminal.

Show Your Customers How By Selling Home Owners

By A. C. Prange

Manager, Supply Sales
General Electric Supply Corporation

THE facts that electricity is the most versatile, most convenient, and most economical servant in the modern home, that electricity works day and night to provide household comfort and convenience, that there is no other modern service as useful as electrical power—all those facts are probably not news to you.

Because you're in the electrical business.

You also know—and may have told your contractor and dealer customers—of the importance of adequate home wiring to meet the needs of appliances designed for modern electrical living.

But you may not have pointed out to those dealer-customers the practical value of preaching the gospel of electrical modernization to the people of their communities.

Better wiring means more facilities to take care of more and better electrical products. Convince people of the need for bringing their homes up-to-date electrically and you have opened the door to more sales of electrical merchandise.

"Remember," says the "Electrical Modernization Guide" recently published by the General Electric Company's Appliance & Merchandise Department, "for each circuit you add—you add another servant in your home."

That's the story for you to tell your contractors and dealers—and for them to tell Mr. and Mrs. American Homemaker.

Ever since electric lights were first installed in houses, people have realized that something was not completely successful about their wiring systems.

In some homes, there are not enough lights, switches and outlets; in others, flickering lights, fuse blowouts and other annoyances result from the use of electrical appliances—and, in addition, the appliances themselves do not give perfect service.

But, to date, comparatively little has been done in the field of electrical modernization. The process of bringing wiring up to date has always seemed to be so involved and so expensive that few families have considered it seriously.

And yet the need for improved wiring becomes more urgent with every passing day.

When Mr. and Mrs. Smith built their home some years ago, for example, they made what they thought was adequate provision for heating, plumbing and electrical service. The uses of the heating and plumbing systems have not changed much during the years, although a faucet or another bathroom may have been added to the plumbing facilities and the heating unit may have been modernized.

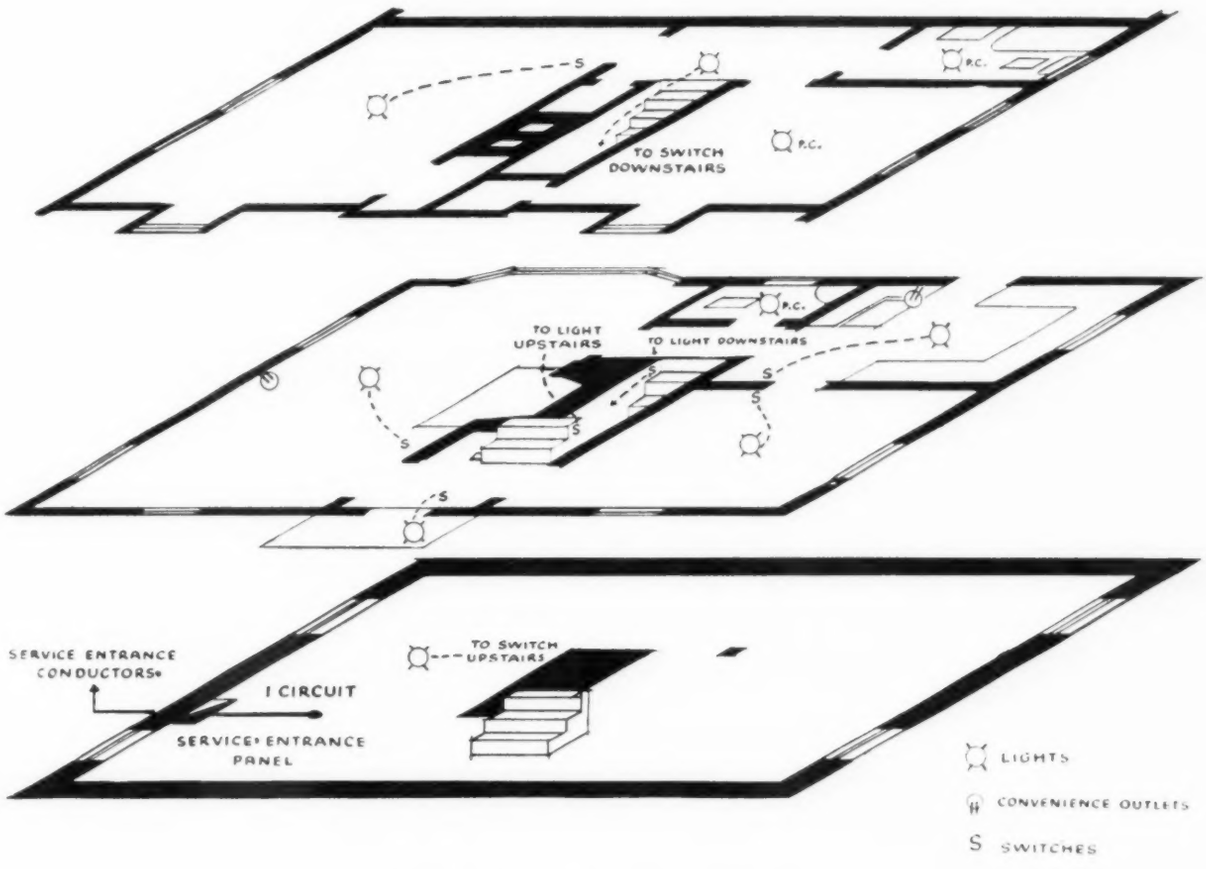
But the wiring system, originally planned to serve only a few lamps, a flatiron and perhaps a toaster, is now called upon for so many jobs that it cannot be expected to carry the additional load efficiently in its original form.

Here is just a partial inventory of the electrical appliances which are available to average American homes today. There's the electric range, refrigerator and dishwasher and garbage disposal unit; there's the electric mixer, the toaster, the roaster, the sewing machine, the coffee maker; there's the vacuum cleaner, the washing machine, the clothes dryer, the ironer; there's the home freezer; there's the electric shaver, clocks, water heater, automatic blanket and electric furnace control—all that, in addition to the home lighting system, which makes use of many, many more lamps and fixtures than it did a generation ago.

Obviously an old-fashioned wiring system is by no means designed to carry such a load.

And people are not going to buy new electrical appliances which they know cannot be handled by their wiring system. Or, if they do buy some new electrical product, they will be back to the dealer soon with a complaint about the appliance's unsatisfactory operation. Their opinion is that the product sold to them was inferior. The appliance may be of the highest quality, but it will never give 100 percent service unless the wiring system is properly organized to meet the demands of the

To Get More Business On Electrical Modernization



OLD WIRING

Here is an isometric view of a five-room, one-family house as it might have been built fifteen or twenty years ago. It still is a nice, modern home in all respects except for the wiring. The heating and plumbing systems are probably adequate. All the elements necessary for modern electrical living are available in this home except modern, adequate wiring.

When built, this house was equipped with one circuit, ten lights, five switches and two convenience outlets . . . enough wiring for life twenty years ago. But—definitely too little wiring for the electrical living of today and tomorrow.

modern electrical home of today.

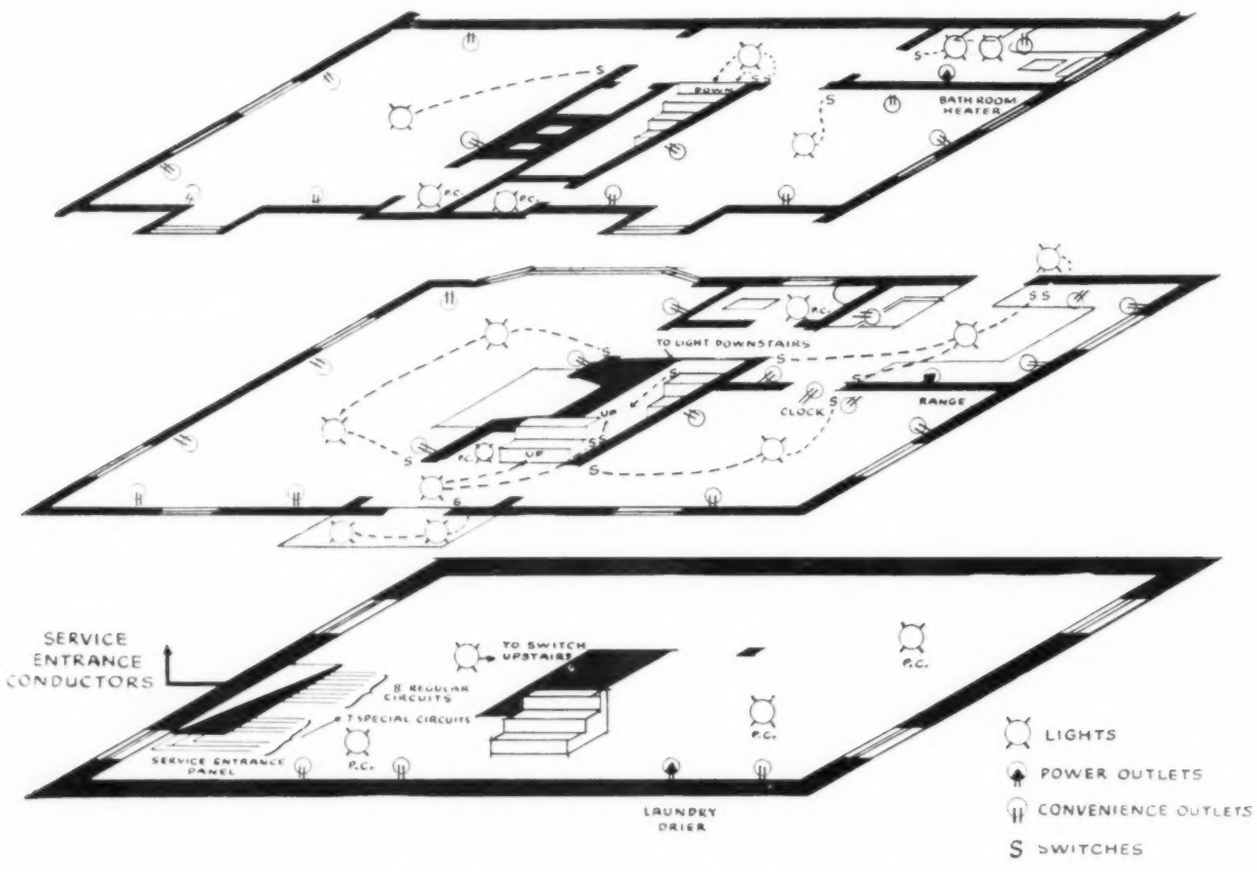
Electrical modernization, contrary to the belief of many home owners, does not necessitate tearing up the walls and floor of a house, nor is its cost prohibitive.

By proper planning and by adding to the wiring system only those parts which are essential, the cost of electrically modernizing a home need not exceed the cost of the redecoration of one or two rooms.

The add-a-circuit modernization plan, providing adequate copper and plenty of convenience outlets in the electrical load area of the house—the kitchen, dining room and laundry—with the least fuss at the lowest possible cost, does not result in a complete modern wiring system, but it does result in enough improvement to make possible the successful use of today's and tomorrow's electrical appliances.

Electrical dealers and contractors can perform a much-needed public service by urging customers to survey their homes carefully and to answer the question, "What's wrong with the wiring—and why?"

Shortcomings in the wiring system may be in the visible part—the convenience outlets, switches and lights, or the invisible part—the wires themselves. It is deficiencies in the wires which lead to poor appliance operation, power failures and increased cost of electricity, because improper wiring leads to a drop in electrical pressure and appliances cannot perform efficiently without adequate correct pressure. Since electricity is



ADEQUATE WIRING

Here is the same house as shown in the previous illustration. But now it is wired to present-day standards. It is wired with eight regular circuits, seven special circuits, twenty-one lights, twelve switches, thirty convenience outlets and four special outlets. Electrically, this house is fully up to date. It has enough circuits to supply all lights and outlets properly. It has enough lights to meet all modern seeing tasks. It has convenience outlets where they are needed to operate appliances conveniently and efficiently. A complete rewiring job, thoroughly planned for modern requirements, made this old house young again.

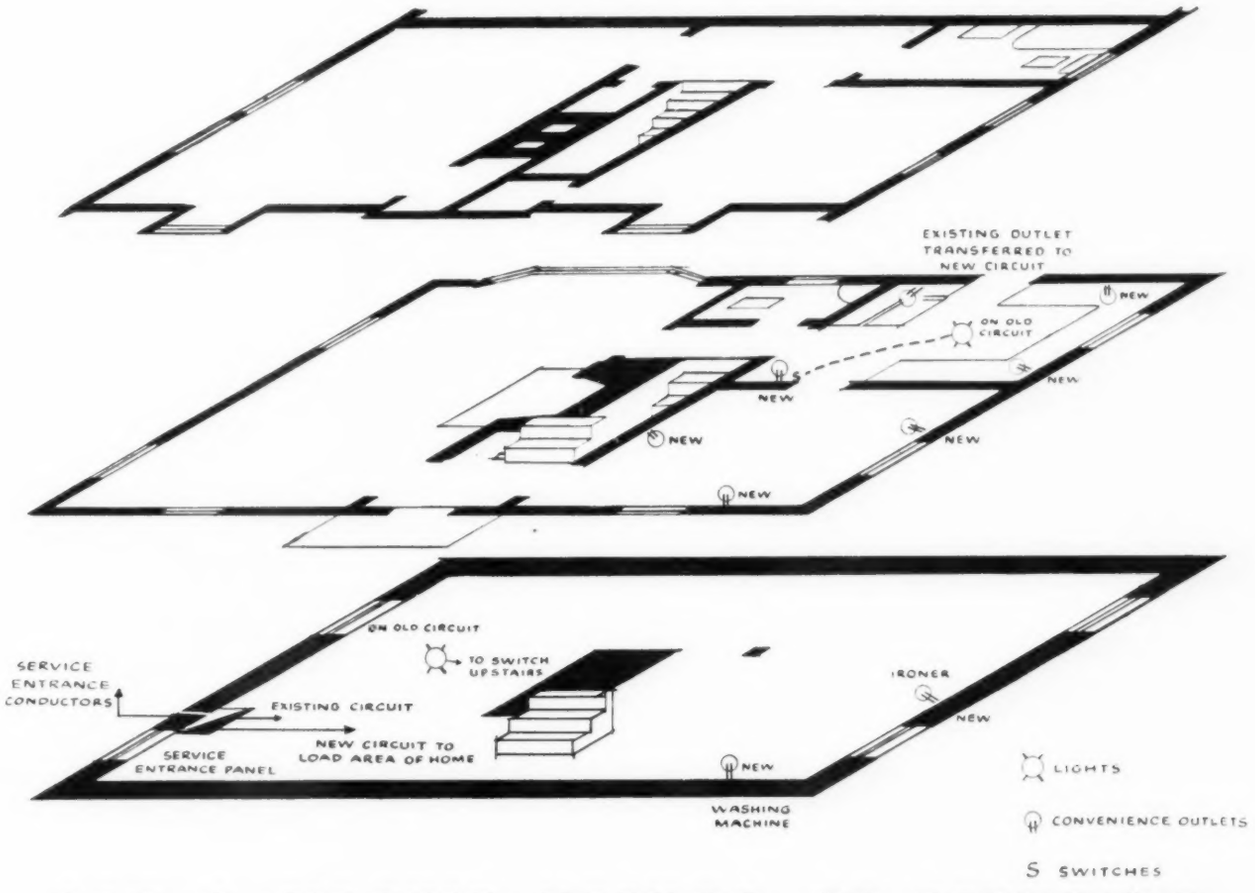
paid for in kilowatt hours, the longer operation of appliances necessitated by a pressure drop results immediately in higher electrical bills.

The add-a-circuit plan is a simple one. To install a new circuit in the kitchen area, for instance, you need only a line of cable from the service entrance panel to the outlets. That's all. The new circuit should have conductors heavy enough to permit the use of as many appliances as you wish at the same time and enough outlets to avoid the necessity of "unplugging" one appliance in order to use another.

The service entrance panel should be checked, too, to make sure it is large enough for the additional circuit. If not, an additional, inexpensive fuse panel may be installed easily.

If a homeowner tabulates the number and location of additional convenience outlets, lighting outlets and switches necessary to bring the house up to date electrically, according to the National Adequate Wiring Bureau's residential wiring standards, an electrical contractor can determine quickly how many new circuits are indicated.

The salesman who shows his contractors and dealers how to "sell" housewives on electrical modernization has not only done his good turn for the day but has opened the door to future appliance sales to satisfied customers by making sure that those homes are equipped electrically to handle the appliances at their highest efficiency point.



ADD-A-CIRCUIT METHOD OF REWIRING

Here is an isometric view of part of the house as illustrated in the two previous drawings. It shows the addition of only one circuit to the old wiring system. The circuit is directed entirely to the kitchen, dining room and laundry area. Eight outlets have been installed on this circuit. The wire size is No. 12 AWG. It permits the use of many appliances entirely independent of all other parts of the house.

Television—When, If and As... Intensive Training of Dealers

TELEVISION will offer an extremely interesting and profitable sales field for the electrical wholesaler and his salesmen in territories that have video broadcasting now or are about to open up. That it will continue in high gear for the next five or six years is indicated by a recent consumer survey made by Sylvania Electric Products, Inc. Estimates are that the market potential for home receivers will reach nearly 10,000,000 sets in this period, *providing that telecast facilities are made available in all urban areas.*

Rapidly increasing consumer acceptance of television is clearly indicated by the fact that, of the urban families interviewed, 26.6 percent stated that they are planning to buy a receiver and 18.5 percent were found to be considering, but had not made up their minds. This means that 45.1 percent, or 9,603,000 families, are considering purchase with the possible prospects fairly evenly distributed in the income groups.

If all this were to materialize the total market potential in the next five to six years would be $2,416,446,000. Quite obviously this figure is beyond reason, but it does give some idea in dollars of the possible extent of the market.

Only one out of six prospects want home demonstration BEFORE purchase. DuMont photo.

Electrical Wholesaler in Key Position

Aggressiveness of promotion and merchandizing have pointed up the successful introduction and high degree of acceptance of electrical appliances in this country. If the electrical wholesaler, with the distribution facilities he is able to offer, will promote the sale of television sets in the same aggressive way and train his salesman to see that his dealers follow suit, this new and profitable market can be cultivated profitably. It is a market that will require expert merchandising and expert servicing, for the wholesaler's responsibility will not end until the television receiver is installed by his dealer in the customer's home and is operating to the continued satisfaction of the customer.

Factors in Selling Television

It is true that the electrical wholesaler has many solid years of radio sales and service experience tucked under his belt. However, television receivers are quite different, electrically and mechanically, from broadcast sets and the sale, installation and service of them is a much more complex affair.

At first glance, the sale of a tele-

Will Need Selective Selling, For Expert Selling and Service

AT THE FIGHT—IN DISCOMFORT

Biggest audience in history of television saw recent Louis-Conn heavyweight title fight. Top preference in television programs is sports—rated first by 33 percent of families in Sylvania Electric Survey. Drama by real people is next choice. NBC telecast equipment catches knock-out blow photo above. National Broadcasting Co. photo.

SEEN AT HOME—IN COMFORT

Among urban families, 5,660,000 definitely plan to purchase home television sets and 3,943,000 may but are not definite. This indicates that a total of 9,603,000 families are considering purchase. Emerson Radio photo.

vision set may seem like a minor job. Far from it. Consider some of the factors involved in the sale and installation of the set by the electrical or radio dealer:

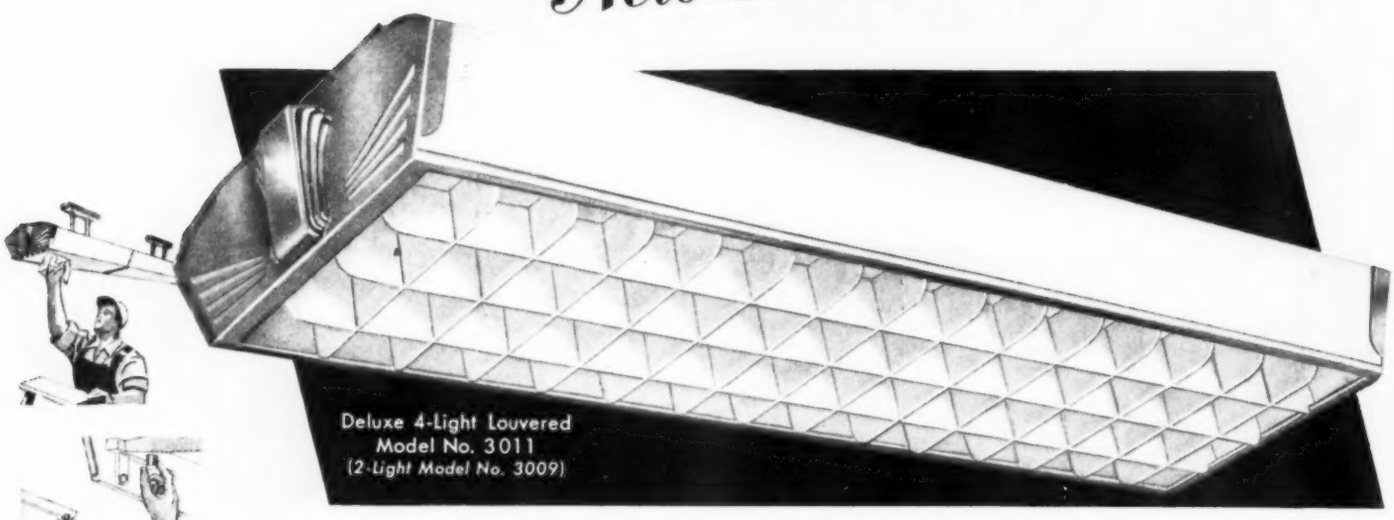
Proper demonstration of a set must be made before purchase. In some cases, as in the sale of the broadcast set, full demonstration may not be required in the home of the prospective purchaser, but it is highly advisable to insist on an adequate demonstration so that the capacities and limitations of the receiver may be fully realized.

Next the dealer must determine whether the prospect's home is in an area where good reception can be

New DESIGNS!

New FEATURES!

New LIGHTING EFFICIENCY!



Deluxe 4-Light Louvered
Model No. 3011
(2-Light Model No. 3009)

IN THE *New* COMPLETE LINE OF

MITCHELL

Commercial Luminaires

ALL THESE FEATURES!

- Higher Light Output—Less Glare
- Scientific Shielding
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- Luminous End Plates
- Instant Start
- Surface or Suspension Mounting
- Quick, Easy Installation and Servicing
- One-Man Quick-Mount
- Fleur-o-Lier, U.L. and E.T.L. Approved
- Single Carton Packing
- Mitchell Guarantee

You readily solve every commercial lighting problem for stores, offices, schools, and public buildings . . . with the complete new MITCHELL fluorescent line! You provide new lighting comfort and efficiency . . . add new style and beauty, offer more value per dollar. For MITCHELL ingenuity brings you new modern designs in 2-light and 4-light units . . . glass-shielded, louvered and open types . . . Instant-Start . . . new patented "One-Man Quick-Mount" . . . and other features! Installation is simpler than ever. Maintenance is made easier for servicing economy. With the complete and powerful selling set-up MITCHELL provides, you have an unlimited opportunity for volume sales and profits.

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FAR WEST: Complete Modern Plant and Sales Office at Los Angeles Serves the Entire Pacific Coast Area
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MITCHELL
FOR TOP LIGHTING VALUE

Makers of Commercial and Industrial Fluorescent Lighting Equipment Store Window Lighting • Spotlights and Floodlights • Desk Lamps Portable Floor and Table Lamps • Bed Lamps • Ultraviolet and Infrared Health Lamps • Residential Lighting Specialties . . . Rad-i-Air Germicidal Units (made by Tru-Air Ultraviolet Products Co., Los Angeles.)

assured under normal conditions. Nothing could happen to prejudice more quickly the purchaser against television than to buy a set and then find that reception is poor. It will take a master salesman to win back that customer's confidence.

The dealer must be able to recommend the correct type of antenna and see that proper installation is made. This includes such considerations as correct size, mounting, protection against reflection, lead-in, grounding and adjustment in case of insufficient pick-up. Correctly estimating and quoting an installation cost to the customer is a necessary part of the sales job and can be classified as profitable "plus" business for both the wholesaler and the dealer.

A complete test and demonstration should be made after the receiver has been installed. The average person is so accustomed to turning knobs and pushing buttons for good reception that the operation of a television receiver will seem somewhat complicated. It need not be if proper instruction is given. In many cases the difference between poor and excellent reception will lie in the failure of the operator to understand the proper use of the controls—the fault will not be in the equipment, but in the way it is handled.

It will be the responsibility of the electrical wholesaler to supervise closely his dealer's operation and make sure that the dealer performs every step to secure customer satisfaction. Proper installation and demonstration can do much to cut down those unnecessary service calls that seriously cut into the profitable conduct of dealer operations.

Your Dealer Must Have Adequate Service Set-Up

The electrical wholesaler can count on the manufacturer for full assistance in training his own organization in the fundamentals and techniques of television receiver servicing. From there on, the wholesaler must assume the full responsibility of training his customers—the electrical and radio dealers. This will be a program of continued education due to the developments that are certain to materialize in the television field. It will also require continued supervision by the wholesaler to see that his dealers closely conform to the service requirements he has established.

For the majority of repairs and service, the wholesaler will have to furnish only the initial training and replacement parts and tubes to the dealer. Some of the servicing will require special equipment in which the dealer must expect to invest although it may be used only infrequently because the customer's satisfaction with a television set will be measured by the speed with which the dealers' trouble shooter puts a set back in commission.

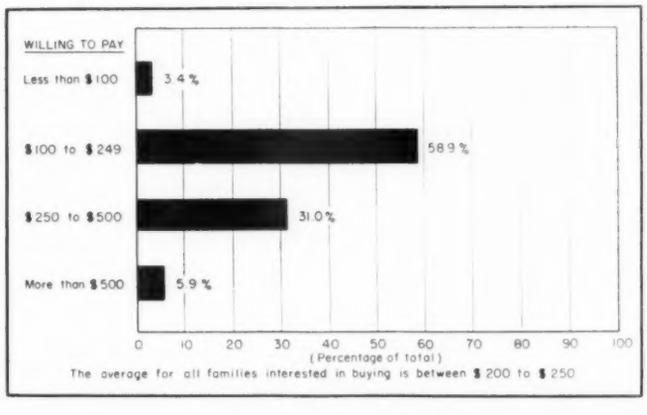
Average family will pay $200.00 to $250.00 for television set. Belmont Radio photo.

Purchasers of television receivers will be exacting in their demands for service for the first few years that television is in its "novelty" stage. Therefore the servicing must be prompt and accurate. It should not be viewed as an attendant "headache" that must be taken with the advent of a new product. If it is the function of a well organized operation, it can be a truly profitable venture—for the electrical wholesaler, as well as for the electrical and radio dealer. It can be invaluable as a means of maintaining customer goodwill, and it is certain to lead to sales of other electrical merchandise.

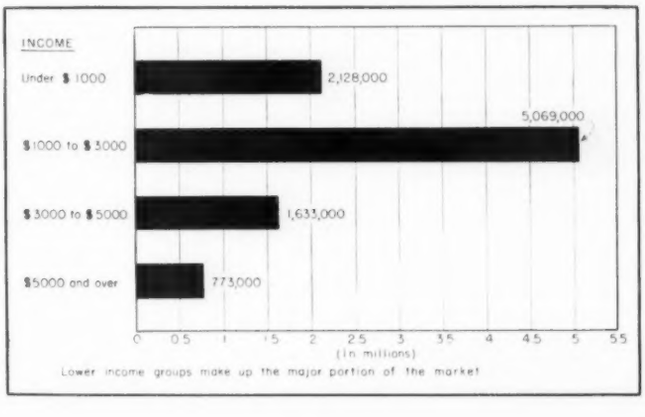
The manufacturers of television receivers fully realize that the sets they produce and offer must give the purchaser top value for his investment. They also realize that their success depends directly on the success of the electrical wholesaler and his dealers.

The responsibility of aggressively cultivating the television set market lies entirely on the electrical wholesaler. Now is the time for him to formulate his sales and service plans for himself and for his dealers—not for just a short term—but for a long period of highly profitable business.

Price Preference By Families



Market Potential By Income Groups



Show Your Appliance Dealers

Two proponents of Fair Trade selling record here some experiences and observations that make valuable reading for the wholesalers' appliance salesman*

What Fair Trade Means To The Retailer

By Russell A. Atkinson

President, R. J. Atkinson, Inc.

WHAT does Fair Trade mean to the retailer? Well, in the first place, and I am saying this personally and not as a representative of any association, the retailer wants Fair Trade. I define that type of retailer as one selling to the consumer at retail, not a retailer selling to the consumer at wholesale, or at discount, or any other way but at retail.

The retailer is close to the consumer and therefore knows the consumer's picture, I think, better than any other step in the chain of distribution. He is in a position where he can make or break a sale. Irrespective of laws, the contact the retailer has is with the man who is going to buy and use the goods. And if the retailer likes his Fair Trade contract with the manufacturer, he will sell the manufacturer's products.

The retailer is a servicing and buying organization for the community. He maintains stock for the customer's selection, and in the maintenance of that stock, he has certain costs. These costs are determined ahead of time. He has the cost of inventory and the cost of maintaining that inventory in a salable style. He also has the cost of the selection of new merchandise when it comes on the market, so that his community can be well-represented in the newer and more modern merchandise. All of this is in his cost of doing business. And the retailer, the wholesaler, and the manufacturer must realize it.

He, then, has the problem of educating his salesmen. A retailer, be he large or small, who does not educate his salesmen will fall by the wayside and quickly. He also has the opportunity and the duty to offer easy payment plans—select and offer easy-payment plans to his customers, particularly on major merchandise—plans which fit into the consumer's picture in his particular community. And for the average, small retailer, that in itself is a job.

Now, the retailer, by maintaining prices under Fair Trade, can better do this servicing and buying job for his community. In the first place, he knows his profit margin and can therefore give better displays for his customers. That is in his profit margin. He knows what his profit margin is before the sale is made and not after. This influence extends itself into better service of mechanical devices, and I think that is important under the guarantee. This service, he knows before the sale, is covered by his margin. He doesn't have to worry after the sale how he is going to get his cost of service out of it.

It seems, in talking about Fair Trade contracts, that there is one primary thing that should be included in the contract. I have heard it called good-will and good-faith and a lot of other good things. I prefer to call it honesty—honesty of the manufacturer, in the first place, in drawing his contract to take care of some of the things that I have mentioned. There is, also, the problem of trade-ins and the problem of handling seasonal merchandise. The manufacturer knows these things exist and he should include them in his contract. Let him be honest about it, for an honest contract is ninety percent fulfilled.

Of course, then, the retailer should be honest, too. I have sat in with retail groups where they took a manufacturer's contract and just tore it apart to see where the weak spots existed so that they could evade it and cut prices. The retailer cannot do that. He must be honest, too, and not look for an evasion of contract.

Another thing I think the retailer can do, and do successfully to help Fair Trade, is to advertise that Fair Trade contract to the consumer and show the consumer that by buying under Fair Trade he is getting the best deal.

Because of the fact that the retailer is closest to the consumer, I would like to touch on the advantages that the consumer gets under Fair Trade. In the first place, he can buy at the store of his own selection at the same price any other store sells Fair Traded products. He can buy at the store which better displays its merchandise and which has more

How Fair Trade Selling Is Their Best Bridge To Better Profits

intelligent sales people who he feels can best serve him. Neither does he have to read all the ads in the papers to find out whether he should buy in one particular store or another. Under Fair Trade there is a larger margin. This makes it possible for the retailer to have better educated sales people, resulting in better, more courteous service.

Fair Trade makes a franchise more valuable to the retailer because his profit is established and it opens the door to sounder and more cordial relationships between retailer, manufacturer and consumer. It eliminates cut-price, that we know. A manufacturer can issue a franchise or take on a retailer not based solely on the volume that this retailer might do but based on the facilities for selling his products that the retailer might have.

It also fosters better relationship between the salesman selling the retailer and the retailer. The fact that the salesman does not have to worry whether the retailer is cutting price or whether he should be sold or should not be sold leads to a friendship which some of us who have been in business quite a while remember with some nostalgia. Business used to be a friendship game, but immediately preceding the war, it got to be a very, very cut-price game.

One thing Fair Trade should do is eliminate "discount houses" and "trans-shipping" by retailers. These are two of the major evils in any territory in which there is a big trading center.

Yes, the retailer wants Fair Trade.

A Horse Sense View of Fair Trade

By Larry A. Clavin

Sales Manager, The Simmons Company

IN order that you may better understand the Simmons Company's reasons for Fair Trading its products I believe it would be purposeful to touch briefly on the company's history and the development of its sales program.

From its inception almost seventy-five years ago our company has concentrated its production primarily upon consumer goods which it has always sold exclusively through legitimate retail outlets direct to the public.

Because it produced quality products sold at a fair price the company expanded steadily. In the early 1920's, however, the company came to a fork in the merchandising highway. If it took the first fork it safely could continue as one of the large manufacturers in its field. If its executives had the courage to take the second fork it was conceivable that through courage, foresight and good management that it could become the dominant manufacturer in its market.

At that time we developed and introduced an inner spring mattress. This new mattress retailed generally for about $90.00. It competed with all hair mattresses which retailed for approximately $100.00. Hair mattresses were available only to the Astors and the Vanderbilts. The average man could not afford such luxury. Mr. and Mrs. Average Citizen had to put up with mattresses filled with cotton or excelsior, most of which weren't fit for Mrs. Astor's horse.

It was quite apparent to Mr. Zalmon Simmons, who was then president of the company, that if production could be greatly increased through quantity sales of a quality product, the price could be brought within the reach of millions of families who previously had never been able to afford real sleeping comfort.

If this bold concept—to make luxury sleeping equipment widely available were to succeed—three things were necessary. The mattress must be identified by a distinctive name and trade-mark. It must be backed by a national advertising campaign and it must be sold *at an established price*. It was upon this program that our "Beautyrest Mattress" was launched.

Identification of the products was necessary not only to back up the advertising campaign but to protect the customer from misrepresentation. Advertising was necessary for we had

JOBBERS' SUPPORT

As You Like It!

INTRODUCED BY HOLUB INDUSTRIES, INC.

SYCAMORE, ILLINOIS

SYCAMORE, ILLINOIS—You can afford to develop attention to the "Holub" line. This new company is going in for *real jobber support* of Motor Maintenance Equipment and all other products listed below.

Holub Industries has adopted a wholesalers' policy you'll like—one you've needed—a 100% one with *no exceptions.*

What's more, all Holub products will carry a *generous* jobber margin. Worth your while to develop new volume repeat business on fast-moving Motor Maintenance Equipment, a large untapped market for wholesalers—enough margin to allow you to meet the competition of "direct-selling" manufacturers.

BERT E. HOLUB

until recently was General Sales Manager for over 20 years of a well-known corporation manufacturing maintenance equipment. Mr. Holub organized Holub Industries, Inc., on March 15, 1946.

Many Holub products will be individually packaged so that they need not be repackaged when shipped out. In addition, FULL FREIGHT ALLOWANCE will be given on *all orders* and on *all products* on $48.00 assortments or over.

This 100% jobber policy has already been acclaimed by many of the country's leading jobbers as being just what is needed to put the Motor Maintenance Equipment business *into the channel where it rightfully belongs.* For your prices write HOLUB INDUSTRIES, INC., Sycamore, Illinois.

OTHER HOLUB PRODUCTS—

WIRE CONNECTORS • FUSE CLIP CLAMPS • FUSE REDUCERS • CIRCUIT AND VOLTAGE TESTERS • MOTOR DRIVEN WIRE STRIPPERS • FOOT OPERATED WIRE STRIPPERS CLEANERS, INDUSTRIAL • CARBON BRUSH SEATERS • COMMUTATOR MILLING CUTTERS • LATHE LIVE CENTERS

a tremendous job of consumer education, and price maintenance was essential if the dealer was to be assured a reasonable profit for his part in a program which was to change the sleeping habits of a nation. Finally, the public had to be protected. And this is a point which is not easy to explain. Our whole program depended on selling a quality product at a quantity price and to reduce that price—to get more quantity just as fast as we could afford to do so. *But* if the price was "footballed," reputable retail dealers would not push "Beautyrest" nor do the educational job required. If this were allowed to happen the expanding cycle which we sought to create would be reversed. Quantity would fall off and the price would have to be increased rather than reduced.

It was these considerations which led us to adopt and pioneer our established price policy. The program proceeded as planned. We were able steadily to reduce the price of "Beautyrest." It was a horse-sense policy because it benefited the consumer, the dealer and the manufacturer.

This policy in the early twenties brought an avalanche of criticism, both from manufacturers and retailers. In fact, many people called our good Mr. Simmons just plain "crazy." But with our determination to popularize what we believed to be the only sound sleeping foundation, through national advertising and at an established price that was within the reach of the average family, we achieved our objective, but not without the many heartaches and financial disappointments that are inherent in pioneering anything new. However, the policy was sound. We stuck to it and made it profitable both to ourselves and the retailers to bring to the public a $90 article for less than $40.

From that experience you can readily understand why, when the Miller-Tydings Act was passed, we entered into Fair Trade contracts in all of the states which permitted this practice. I believe we were one of the first to jump on the Fair Trade band wagon. We were convinced that our policy of establishing the price of an item, assuring the dealer a fair return on his investment was economically sound because the product also had consumer acceptance.

Since the enactment of the Miller-Tydings Act we have placed many other products under Fair Trade. This policy has met with enthusiastic acceptance by our 7500 domestic dealers. Today these dealers credit us not only with bringing good bedding within the reach of the average wage earner but they also give us credit for taking the bedding business out of the gutter and making it an outstanding factor in the home furnishing field.

This policy of offering the public a fine product at a fair price caused furniture and department stores actively to promote the sale of better bedding. Through this process of education the average man has learned that he not only can afford to buy good sleep equipment, but he has learned that it pays big dividends in health and comfort to himself and his family. People no longer sleep on mattresses that are not fit for a horse and, considering that it costs $50 a year to bed down a horse, they are not only sleeping better than a horse but at considerably less expense.

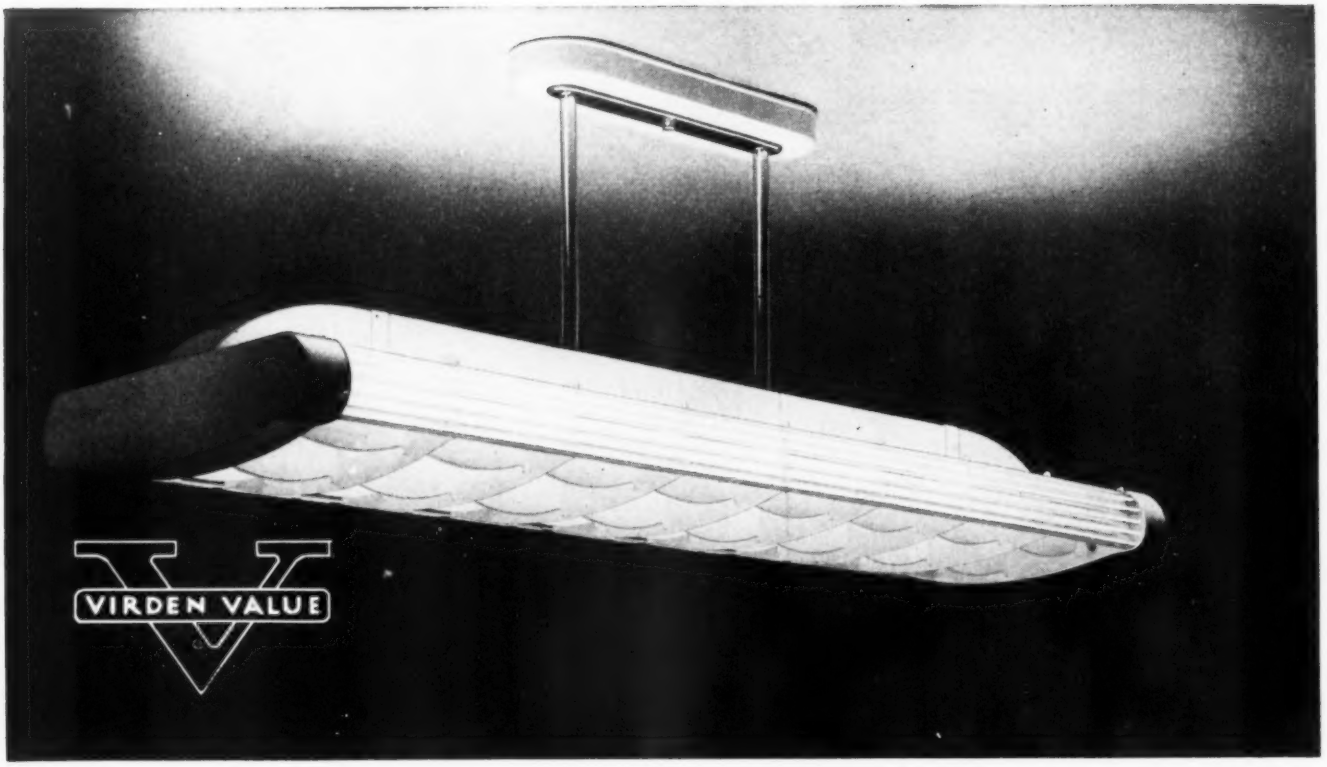
The foregoing sounds like a very rosy picture and the dawn of the merchandising millennium. The road is not quite that smooth for like most roads it has bumps and ruts and twists and turns. In every field there always is a small percentage who are connivers and chiselers. We fully recognize the danger of these small minorities upsetting the economic applecart, not only for ourselves but for the whole industry. Just as in Government or in any philosophy that governs the lives of people, we recognize that if this minority ever becomes established on the tail of the dog, the tail will begin to wag the dog—perhaps since I have referred to a horse so often I should have said wag the horse—and we are ever on the look-out, not only to keep this minority in their place but to keep it from spreading misconceptions or untruths regarding the practice of Fair Trading merchandise that represents an honest value to the consumer.

In this minority there are some stores who deliberately cut the price of branded merchandise in order to mislead the public into believing that everything else they sell is correspondingly cheap. Then there is another group of merchants, particularly large merchants, who feel independent of manufacturers, who cut prices on branded merchandise in order to establish what they call leadership in merchandising. Such claims, we know, are just so much bally-hoo. No retail merchant who expects to stay in business and render true service to his customers can operate on a mark-up below any price fixed item sold nationally. Any such policy simply defies the normal laws of economics and while the consumer may profit today from a cut price, she pays up for it tomorrow when she purchases non-advertised items. Stores which regularly claim to undersell their competitors simply cannot live up to that boast.

The fallacy in the foregoing contention is that under the Robinson-Patman Act retailers cannot buy merchandise from any manufacturer engaged in interstate commerce one penny cheaper than their large competitors. Their cost of doing business is certainly as great as that of their competitors and if they consistently sold for less instead of showing a profit on their operation, they would show an actual loss.

To counteract the activity of this small percentage of smart alecks and chiselers, we teach the members of our sales force the merits of successful operation under Fair Trade. They in turn constantly educate our dealers as to its value. In short, we use Fair Trade as a selling tool. We back this program forcefully through protection of our copyright brands and through the legal avenues open to us under the State Fair Trade Acts by very definite court action. We do not do this simply to assure our dealers a satisfactory profit which, of course, is necessary to cover their normal business expense plus the extra service they render their customers. We do it to assist dealers in building consumer good-will and, gentlemen, the United States Supreme Court's definition of good-will is "the disposition on the part of a person to return to a place where they have been well served."

**These two addresses were delivered at the Annual Conference on Fair Trade. (The National Electrical Wholesalers Association is a member of the American Fair Trade Council.)*



Four forty-watt lamps—every inch an inch of light

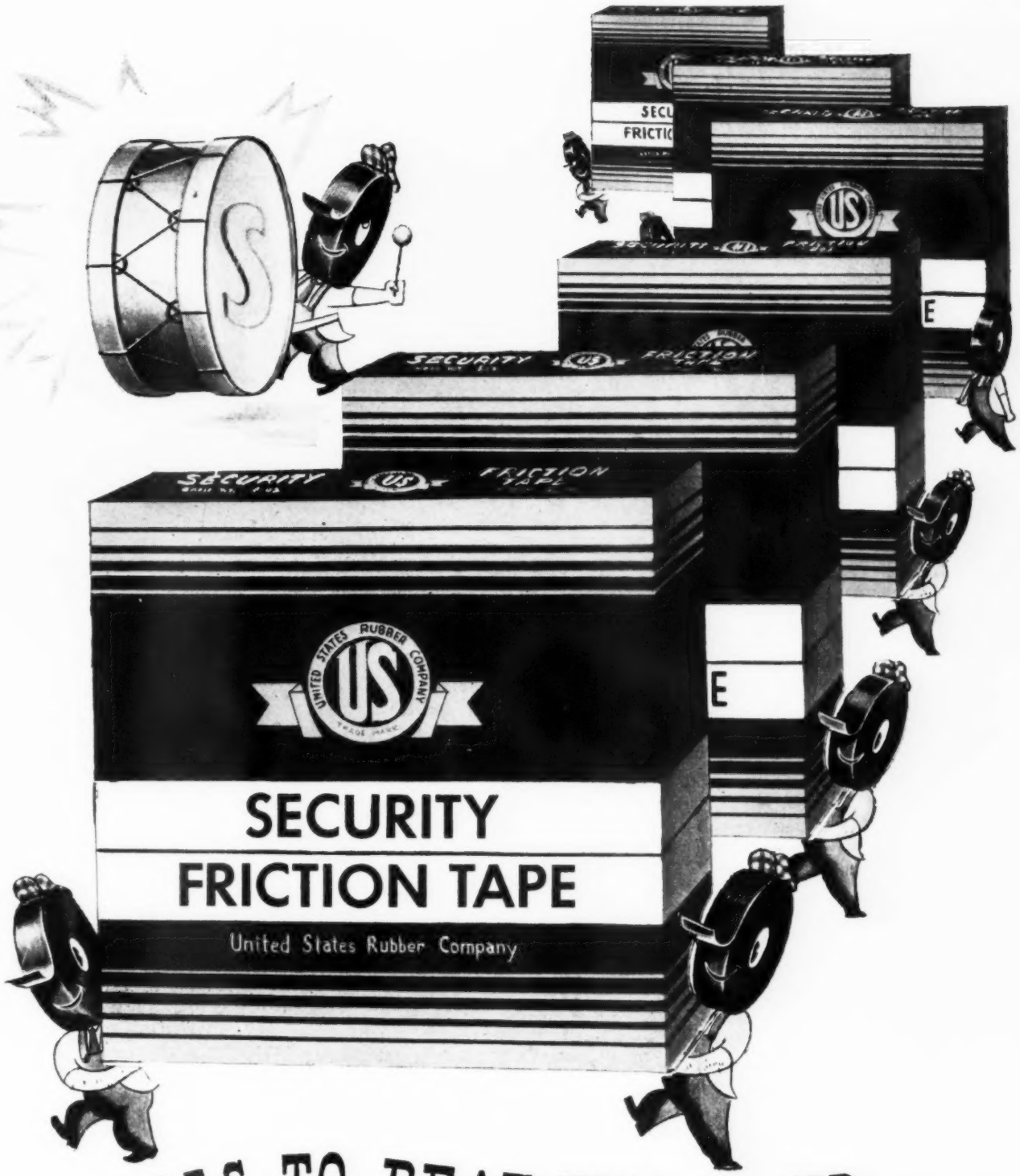
Advance Showing of a new Beauty

THIS preview of an important new Virden Fluorescent, broadly labeled commercial, but obviously suited by birth and appearance for a much wider range of society, positively and affirmatively answers the question—"Why can't a fluorescent fixture be a lovely thing that contributes pleasing atmosphere as well as pleasing light?"

Only a few "luckies" and "experts" have actually seen it. But truth is that this pearly beauty excites breathless interest that culminates in words like, "When can I get 'em?" "How many?" and other eager questions we can't answer correctly. Enthusiasm flares to a new high when they learn that it is priced competitively—a true Virden value.

The John C. Virden Company • Cleveland, Ohio

Member American Home Lighting Institute



SELLS TO BEAT THE BAND

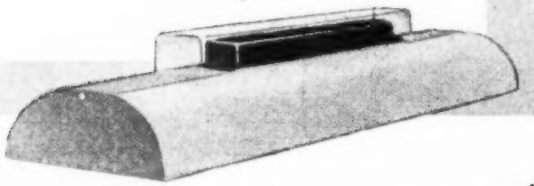
Popular? **You bet! Why? Because Security is straight-tearing... non-ravelling...highly dielectric...has great tensile strength. Its strong rubbery adhesive *sticks* and *holds*.**

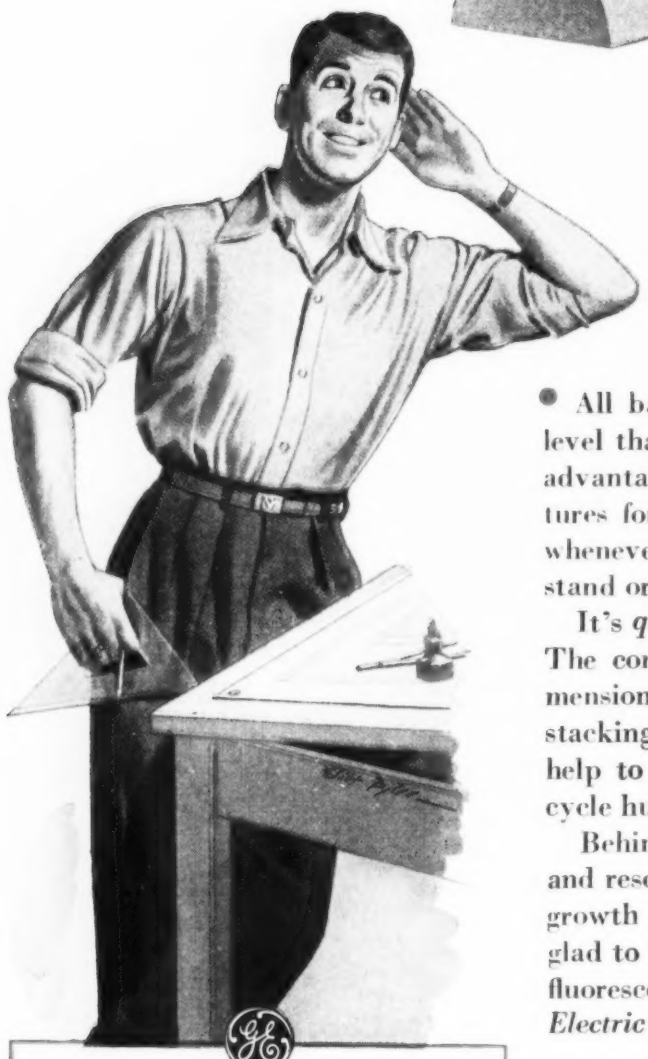
SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

1230 AVENUE OF THE AMERICAS • ROCKEFELLER CENTER • NEW YORK 20, N. Y.

Quiet...
as a cat on velvet





General Electric BALLASTS

HELP KEEP FIXTURE USERS SATISFIED . . .

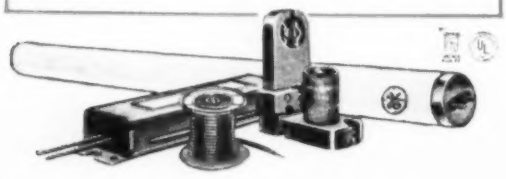
THEY MEAN ADDED PROFITS FOR YOU!

● All ballasts hum, just as all cats purr; but a sound level that stays so low as to be unnoticeable is a major advantage of G-E ballasts. On fluorescent lighting fixtures for offices, hospitals, drafting rooms, studios, and whenever low noise level is the rule, your reputation may stand or fall on this factor alone.

It's *quality construction* that keeps G-E ballasts quiet. The composition of the core steel, the accuracy of dimensions of the laminations, the uniformity of core stacking, the strength of the clamping structure—all help to make a cohesive unit tending to damp the 60-cycle hum.

Behind the design of G-E ballasts are all the research and resources which G.E. is concentrating on the steady growth of fluorescent lighting. Our engineers will be glad to help you select and apply ballasts or other G-E fluorescent fixture components. *Apparatus Dept., General Electric Co., Schenectady 5, New York.*

BALLASTS · LAMPS · STARTERS
LAMPHOLDERS · CABLE
for Dependability



1 Low noise level—for satisfied users

2 Long life—for low replacement cost

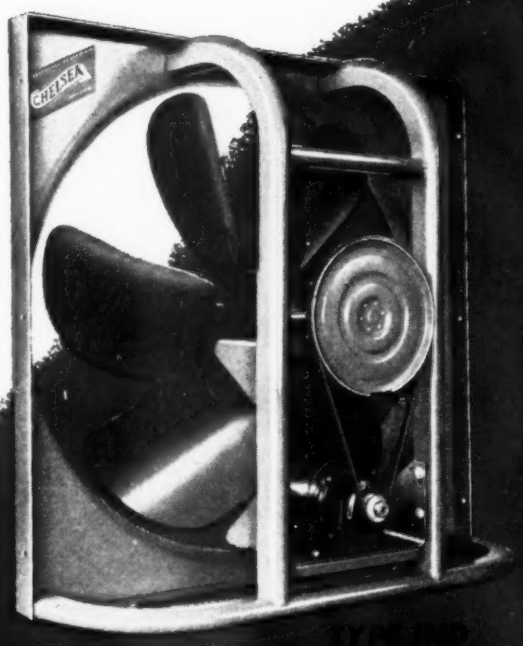
3 Characteristics matched with lamp—for rated lamp life and light output

4 Dimensions that permit use of one wiring channel for practically all fixtures—for simplified parts inventory and lower fixture cost

GENERAL ELECTRIC

408-87-5206

Chelsea Ventilating Coolers for Home, Office, Factory or Store!

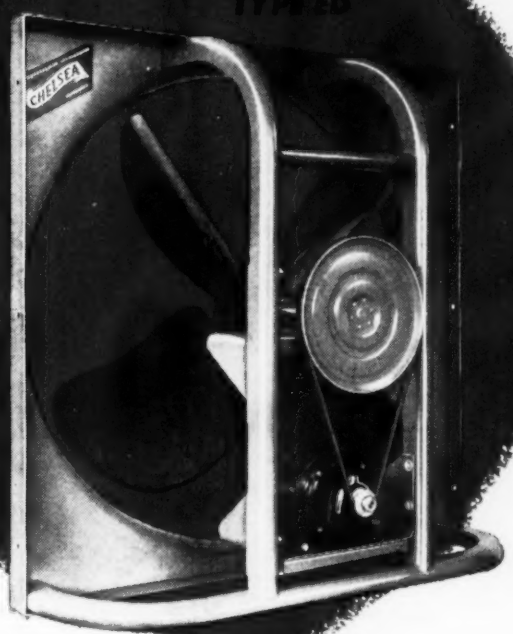


TYPE IND

PLAN NOW

...mand for mod-ern installations that will provide "tops" in liveability . . . in industrial or residential construction. Chelsea comfort coolers afford quiet, dependable performance and operate with maximum economy. All Chelsea equipment is backed by 30 years of specialization in fans and blowers for every application. Specifying Chelsea for home or industry means providing the most in ventilation.

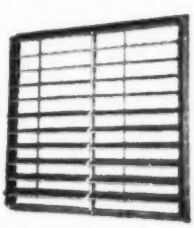
TYPE ED



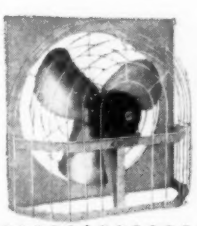
TYPE IND STREAMLINED INDUSTRIAL FAN:

TYPE ED STREAMLINED ATTIC FAN: **...ut, rolled-...ncy under static ...nced blades of heavy ..., totally enclosed ball-bearing ... Moving parts are rubber cushioned.**

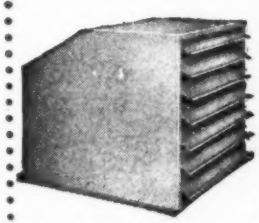
INVESTIGATE THESE WIDELY-USED CHELSEA VENTILATING UNITS



Type LWL Automatic Louvers: For general ventilation installations. Protects fan when not in use. Aluminum leaves pivoted in machined brass to reduce friction; tie rods cadmium plated bushings. Larger units dual to eliminate twisting of leaves.

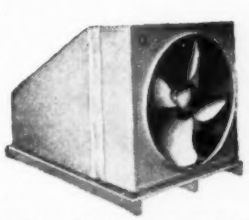


Type AA Utility Fan: For cold storage, meat packer and freezer applications. Totally enclosed ball bearing motor with both front and rear guards. Capacity: AA20 — 3000 CFM; type AA24—4800 CFM. Fan speed—1100 rpm.



Type PH Penthouse Roof Ventilator: For roof ventilation. Operates against static pressures using the IND type Industrial fan housed in steel penthouse with automatic shutters. Completely assembled—ready for installation

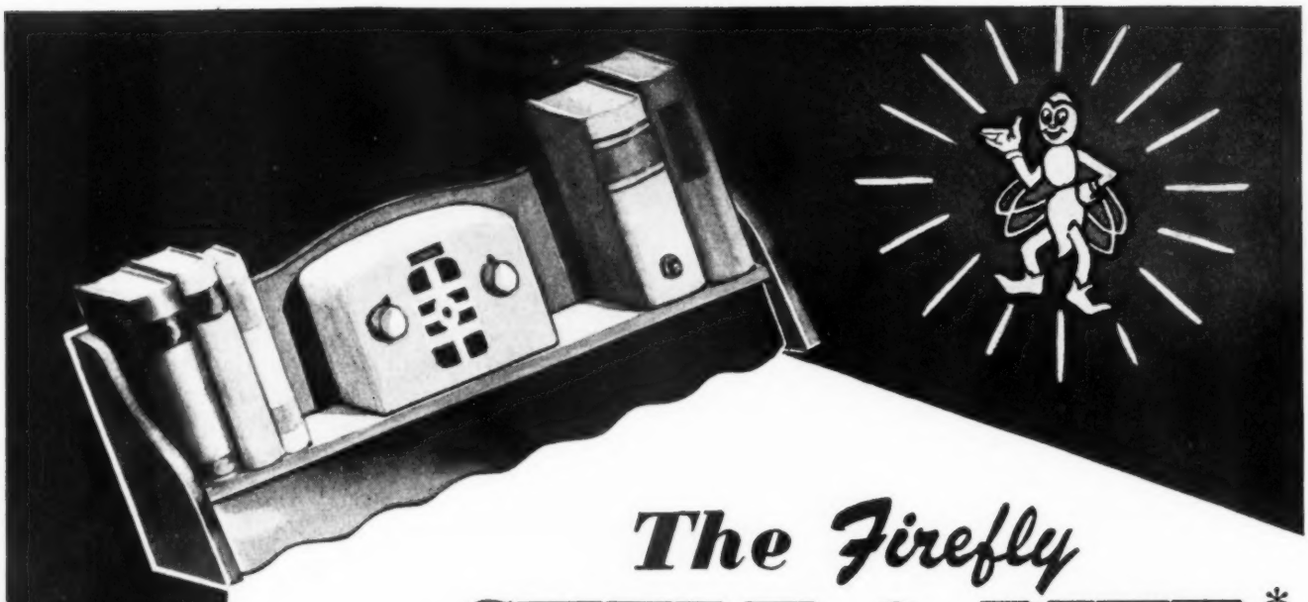
Type P and MC Pedestal Fans: For shops, offices, stores, and factories. Rugged construction with steel die-stamped blades. Motor and fan shaft ball bearings. All parts protected against rust. Available in a wide range of sizes.



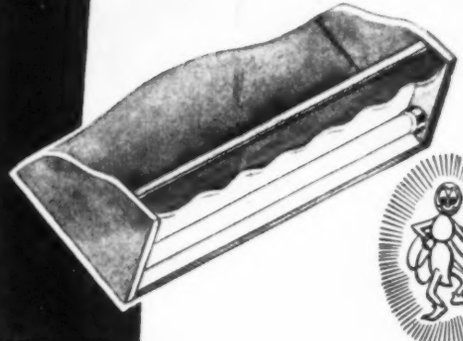
Type EU Package Attic Fan Unit: For cooling homes, churches, hotels, hospitals, schools, etc. New streamlined venturi orifice delivers greater air volume. ASH and VE method certified ratings. Efficient, low current consumption motors.

CHELSEA PRODUCTS

1206 GROVE STREET, IRVINGTON, NEW JERSEY



The Firefly
SHELF-O-LITE*



. . . A Combination Fluorescent Lamp and Shelf For Bedroom, Living Room, Den or Kitchen!

Wholesalers are passing the word along to their furniture, radio, department, hardware and appliance store outlets that the SHELF-O-LITE is a *hot number.*

The SHELF-O-LITE represents "plus sales" all along the line.

- Beautifully finished and constructed of hard plywood.
- Supplied with six foot cord and plug —easily installed in any light socket.
- Has on and off switch operating 20 watt (24 inch) fluorescent lamp.
- Individually packaged and ready for instant sale.
- Choice of bleached, walnut, maple, mahogany, unfinished or off-white.

* Reg. 497482

KAHN MFG. CO. INC.

2051 NORTH 19TH STREET MILWAUKEE 5, WIS.

Formerly Fluorescent Fixtures, Inc.

The Double-Duty HEAT FAN

It warms–it cools

$13.75 Incl. Gov't. Excise Tax

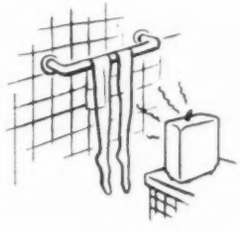
Catalog No. HF-161—1650 watts—115 AC

Catalog No. HF-131—1320 watts—115 AC

COOLS IN SUMMER–
Flip off heating element... the fan alone provides cooling circulation in summer.

QUICK WARMTH–
Quick ... clean ... all-over warmth for home, office, shop and factory.

HAIR DRYER–
Clean...gentle...warming breezes dry your hair quickly, safely, easily.



CLOTHES DRYER–
Plug in your Heat Fan to dry stockings, lingerie or baby clothes in a jiffy.

ALL-OVER WARMTH ALL OVER THE ROOM

The revolutionary forced-air principle of the Thermador Electric Heat Fan makes it far more effective than the ordinary portable. Located in the rear of this amazing heater is a sturdy fan that forces air through the heating element to spread a blanket of clean, fumeless, odorless warmth all over the room in a remarkably short time. And that's not all. Flip on the fan alone—without the heating element—to provide cooling circulation of air in summer.

It's *safer*—No flames, fumes or exposed parts.

It's *smaller, lighter* (weight 7¼ lbs.; height 11⅞"; width 9¼"; depth 5⅝")—A finger tip lifts it.

It's *more attractive*—It has won prizes for its design.

It's *more economical*, too, both in original cost and operation. Yes, it's far-and-away America's finest portable for home, office, shop or factory. For full details write to Dept. EW-7.

THERMADOR

THERMADOR 30th ANNIVERSARY 1916 1946

THERMADOR ELECTRICAL MANUFACTURING CO.

5119 DISTRICT BOULEVARD, LOS ANGELES 22, CALIFORNIA

"STANDS OUT"

Just as a champion swimmer stands head and shoulders above the field, so "ADVANCE" Ballasts stand out . . . in a class by themselves . . . unexcelled in QUIET operation . . . high efficiency performance . . . low replacement cost and long life. "ADVANCE" Ballasts are streamlined for easy installation in fixtures where space is limited . . . designed by expert lighting engineers and approved by Underwriters Laboratories. Take a tip from leading manufacturers of lighting fixtures . . . specify "ADVANCE" Ballasts in *your* equipment.

ADVANCE TRANSFORMER CO.

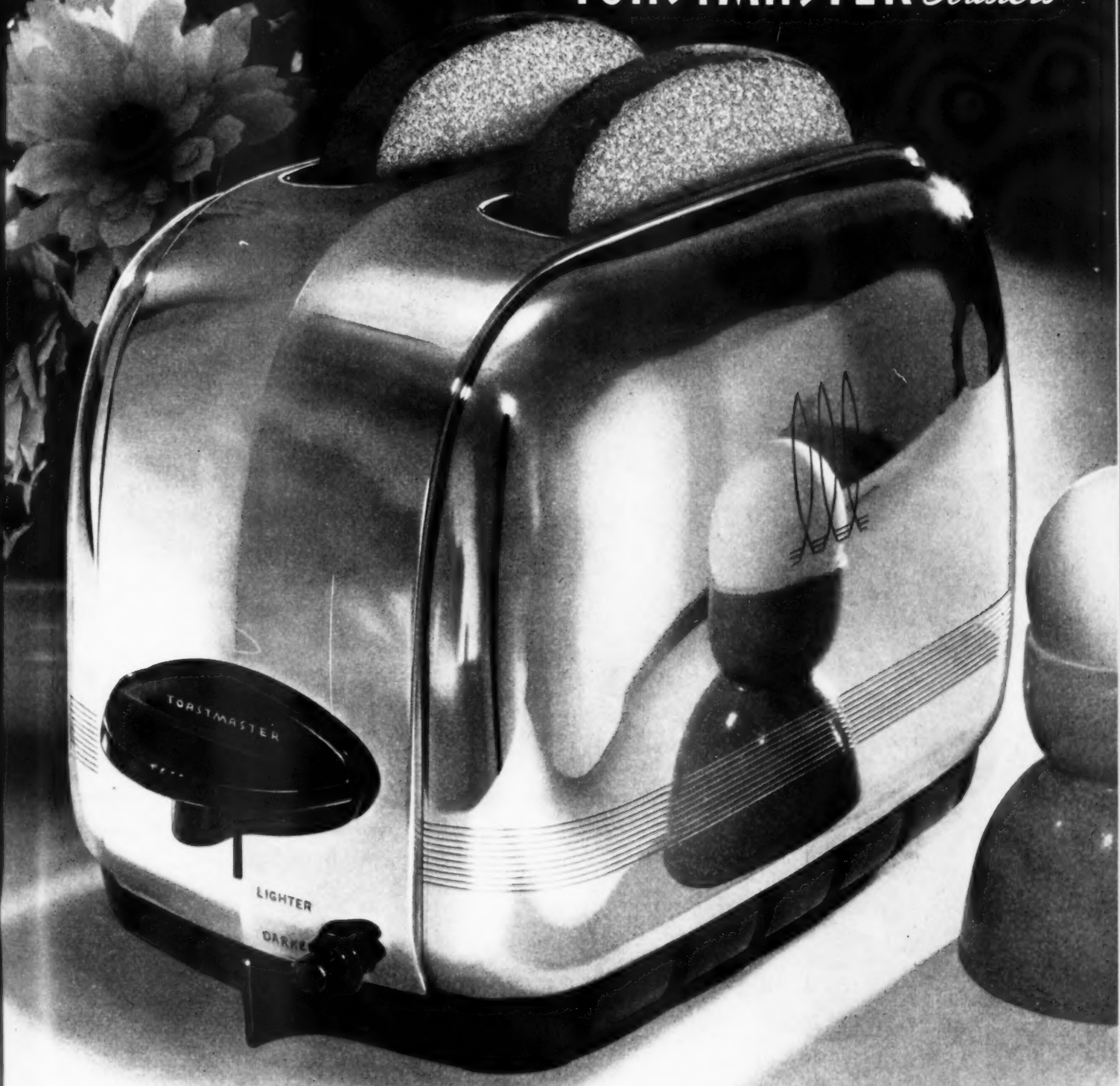
1100 W. CATALPA AVE. CHICAGO 40, ILL, U. S. A.

CABLE ADDRESS: ADTRANS

America's best-known Toaster!

TO YOU, the "Toastmaster" toaster's wide popularity means more profit. It's the toaster that's *easiest* to sell—*in the greatest numbers.* It always has been... more people own "Toastmaster" automatic toasters than all other makes combined. For the "Toastmaster" toaster's reputation for performance, with users and dealers alike, gets around. It's that *confidence* everyone has in the "Toastmaster"* toaster that makes it so profitable to you.

TOASTMASTER *Automatic Pop-Up Toasters*



*"TOASTMASTER" is a registered trademark of McGraw Electric Co. Copr. 1946, TOASTMASTER PRODUCTS DIVISION, McGraw Electric Co., Elgin, Ill.

Mr. H. H. Lundberg says it's Easy

"IT'S A ONE MAN JOB"

INTERCHANGEABLE GLASS PANELS EGGCRATE OR HONEYCOMB LOUVRE
LOUVRES FOR HEAT DISSIPATION
TWO WING NUTS HOLDING WIRED COMPLETE REFLECTOR
PIANO-HINGED
INNER FRAME CLIP HOLDER FOR GLASS PANEL OR METAL LOUVRE
QUICK SLIDING CATCHES
SELF-ALIGNING LEVEL MOUNTING CLIP
10 F.C.
25 F.C.
50 F.C.

Photos Courtesy of ACME STEEL CO. Chicago

"In the work of transforming and rehabilitating this old warehouse so that it will house modern offices (as shown in the photographs), we found the All-Bright REC fluorescent fixtures highly desirable. Thanks to the great flexibility and simplicity of installation of these recessed lighting fixtures, the labor involved, was greatly reduced. Lighting engineers will be interested to know that our light volume was increased from 25 foot candles to 50. F.C. These fixtures are so designed as to provide many features facilitating the contractor's installation job. In this work we had the whole-hearted and valuable cooperation of Wadeford Electric and All-Bright engineers."

H. H. Lundberg

Wadeford Electric Company

LIGHT RIGHT WITH ALL-BRIGHT

ALL-BRIGHT ELECTRIC PRODUCTS COMPANY

Manufacturers of Fluorescent Lighting Fixtures

3917 N. Kedzie Ave. Chicago 18, Illinois

REA Loans $96,687,920, Makes 150,786 New Users

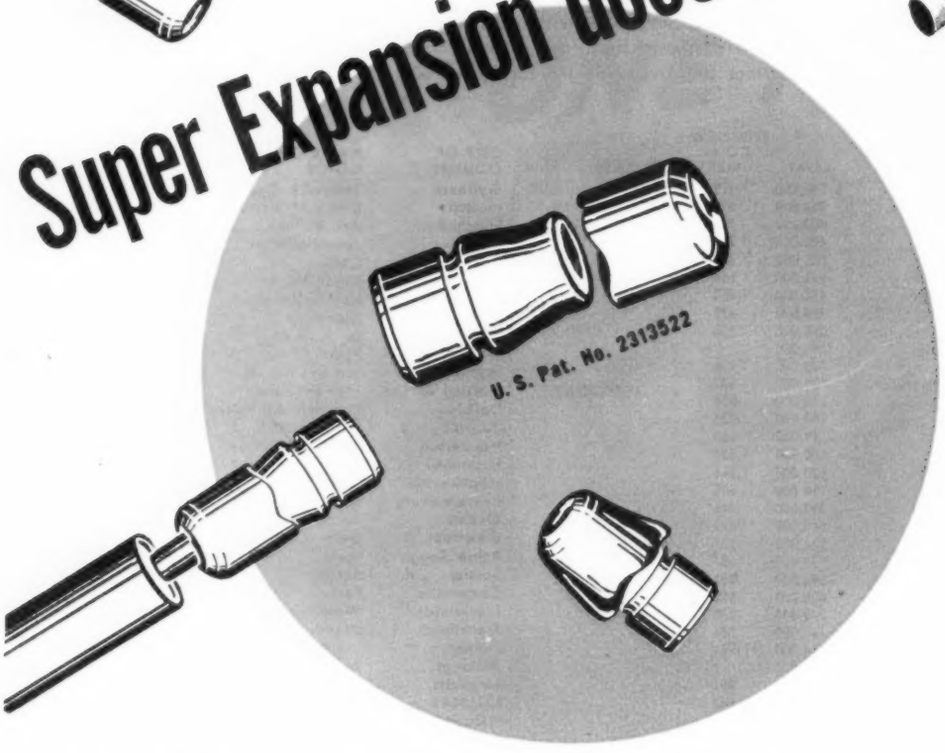
THE tabulation below has been set up in order to allow wholesalers serving rural areas to obtain a quick, concise picture of a new, large market.

The cooperative companies will use the loans to construct power lines, new substations and other improvements for the systems.

The tabulation gives the names of the cooperative receiving loans, the amounts of the loans and the number of new consumers.

STATE	CITY OR COUNTY	NAME OF CO-OP.	LOAN	NO. NEW CONSUMERS
ALABAMA	Brewton	Southern Pine	$ 510,000	1,399
	Centre	Cherokee	350,000	896
	Clayton	Pea River	400,000	754
	Demopolis	Black Warrior	600 000	1,252
	Fort Payne	Sand Mountain	525,000	1,639
	Hartford	Wiregrass	635,000	1,664
	Jackson	Clarke-Washington	655,000	1,851
	Robertsdale	Baldwin County	382,000	685
	Talledega	Coosa Valley	355,000	826
ARIZONA	Safford	Graham County	295,000	...
ARKANSAS	Berryville	Carroll	620,000	1,236
	Blytheville	Mississippi County	123,000	187
	Clinton	Petit Jean	230 000	615
	Hamburg	Ashley-Chicot	190,000	433
	Jacksonville	First Electric	39,000	160
	Jonesboro	Craighead	580,500	1,334
	Ozark	Arkansas Valley	620 000	1,266
	Stuttgart	Riceland	190 000	615
COLORADO	Brighton	Union	393,000	346
	Fort Morgan	Morgan County	540,000	538
	Monte Vista	San Luis Valley	288,000	337
FLORIDA	Chiefland	Central	173,000	681
	Keystone Hts.	Clay	548,000	781
	Live Oak	Suwannee Valley	428,000	596
	Moore Haven	Glades	240,000	230
	Quincy	Talquin	165,000	354
	Sumterville	Sumter	494,000	756
	Wauchula	Peace River Valley	77,000	...
GEORGIA	Alma	Satilla	436,000	854
	Clarkesville	Habersham	209,000	489
	Covington	Snapping Shoals	221,000	684
	Cumming	Forsyth County	310 000	597
	Douglasville	Douglas County	270 000	545
	Gray	Tri-County	50 000	...
	Hartwell	Hart County	264 000	440
	Jackson	Central Georgia	507,000	835
	Jefferson	Jackson	277,000	785
	Louisville	Jefferson County	50 000	150
	Louisville	Jefferson County	245,000	685
	Lyons	Altamaha	217,000	407
	Millen	Planters	50,000	...
	Monroe	Walton	341,000	991
	Moultrie	Colquitt	460,000	832
	Newman	Coweta-Fayette	352,000	911
	Ocilla	Irwin County	465,000	986
	Thomaston	Upson County	129 000	332
IDAHO	Ashton	Fall River	200,000	200
	Gangeville	Idaho County	183,000	246
ILLINOIS	Carlinville	M. J. M. Electric	180,000	469
	Fairfield	Wayne-White Counties	570,000	1,475
	Flora	Clay	200 000	413
	Mattoon	Coles-Moultrie	265,000	655
	Mt. Vernon	Tri-County	525 000	938
	Newton	Norris	465,000	884
	Paris	Edgar	325,000	685
	Petersburg	Menard	500,000	887
	Princeton	Illinois Valley	160,000	306
	Steeleville	Egyptian	280,000	489
	Winchester	Illinois	175,000	...
	Winchester	Illinois	565,000	...
INDIANA	Columbia City	Whitely County	65,000	...
	Corydon	Old Capital	12,000	...
	Franklin	Johnson County	65,000	225
	Jasper	Dubois	65 000	148
	Kentland	Newton County	40,000	101
	Peru	Miami-Cass County	95,000	280
	Rensselaer	Jasper County	40,000	...
	Rensselaer	Jasper County	235,000	440
	Richmond	Wayne County	115,000	215
IOWA	Anamosa	Maquoketa Valley	255 000	530
	Bloomfield	Southern Iowa	270,000	528
	Davenport	Eastern Iowa Light	475 000	316
	Estherville	D. E. K.	275,000	456
	Glidden	Glidden	77,000	129
	Hampton	Federated	1,100,000	...
	Harland	Nishnabotna Valley	50,000	232
	Iowa Falls	Hardin County	100,000	170
	Mount Ayr	Rideta	150,000	269
	Onewa	Monona County	80,000	230
	Pocahontas	Central	550,000	...
	Pocahontas	Pocahontas County	225,000	206
	St. Ansgar	Cooperative	94,000	172
KANSAS	Axtell	Nemaha-Marshall	345,000	472
	Clay Center	C. & W.	337,000	553
	Council Grove	Flint Hills	265,000	376
	Girard	Sekan	427,000	564
	Goddard	Sedgwick County	10,000	39
	Horton	Brown-Atchinson	220 000	310
	Hutchinson	Ark Valley	100,000	199
	Ionia	Jewell-Mitchell	316 000	436
	Meade	CMS	26,000	...
	Mound City	Sugar Valley	635,000	908
	Norton	Norton-Decatur	301,000	368
	Pratt	Ninnescah	353,000	454
	Solomon	D. S. & O.	411,000	635
	Wamego	P. R. & W.	238,000	308
	Wellington	Summer-Cowley	360,000	475
KENTUCKY	Bowling Green	Warren Rural	270,000	525
	Corbin	Cumberland Valley	478,000	1,518
	Danville	Inter-County	624,000	1,877
	Henderson	Henderson-Union	560,000	1,175
	Hickman	Hickman-Fulton	331,000	635
	Hopkinsville	Pennyrile	545,000	1,214
	Lawrenceburg	Fox Creek	360,000	855
	McKee	Jackson County	670 000	1,963
	Owenton	Owen County	610,000	1,620
LOUISIANA	Baton Rouge	Dixie	154,000	266
	Bossier	Bossier	180,000	461
	Centerville	Teche	77,000	126
	Franklinton	Washington-St. Tammany	103,000	250
	Franklinton	Washington-St. Tammany	90,000	375
	Homer	Claiborne	470,000	1,119
	Jennings	Jefferson Davis	82,000	298
	Lafayette	Southwest Louisiana	108,000	354
	Lafayette	Southwest Louisiana	204,000	624
	Natchitoches	Valley	585,000	1,118
	Winnsboro	Northeast Louisiana	55,000	353
MAINE	Meddybemps	Denny's River	44,000	50
	Patten	Farm-Home	94,000	179
MARYLAND	Denton	Choptank	687,000	963
MICHIGAN	Cassopolis	Fruit Belt	323,000	...
	Cassopolis	Fruit Belt	20,000	...
	Onaway	Presque Isle County	40,000	80
	Ontonagon	Ontonagon County	192,000	586
	Portland	Tri-County	72,000	160
MINNESOTA	Aitkin	Mille Lacs Region	150,000	245
	Anoka	Anoka County	202,000	172
	Braham	P. I. C. K.	1,737,000	1,820
	Finlayson	North Pine	215,000	172
	Finlayson	North Pine	300,000	466
	Glencoe	McLeod	55,000	60
	Jordan	Minnesota Valley	115,000	140
	Kettle River	Carlton County	670,000	...
	Mahnemen	Wild Rice	360 000	570
	Mankato	Blue Earth-Nicollet	52,000	36
	Maple Lake	Rural Cooperative	1,151,500	...
	Melrose	Stearns	325 000	465
	Pelican Rapids	Lake Region	125,000	214
	Sleepy Eye	Brown County	17,000	13
	Wadena	Todd-Wadena	285,000	560
	Worthington	Nobles	315,000	465
MISSISSIPPI	Amory	Monroe County	360,000	1,438
	Batesville	Tallahatchie Valley	500,000	1,675
	Bay St. Louis	Coast Electric	470,000	714
	Carthage	Central	454,000	1,776
	Columbia	Pearl River Valley	596,000	1,432
	Columbus	Four-County	355,000	1,167
	Houston	Natchez Trace	680,000	2,584
	Lucedale	Singing River	685,000	1,413
	McComb	Magnolia	510,000	1,050
	Meridan	East Mississippi	525,000	1,571
MISSOURI	Butler	Osage Valley	287,000	532
	Cassville	Barry	177,000	375
	Chillicothe	Farmer's	199,000	299
	Dixon	Gascosage	85,000	159
	El Dor. Springs	Sac-Osage	268,000	495
	Fayette	Howard County	105,000	168
	Fulton	Callaway County	285,000	1,203
	Higginsville	West Central	150,000	575
	Lamar	Barton County	79,000	158
	Lancaster	Tri-County	334,000	479
	Lebanon	Laclede	83,000	83
	Linn	Three Rivers	218,000	409
	Maryville	Nodaway Worth	220 000	443
	Monticello	Lewis County	64,000	...
	Mt. Vernon	Mt. Vernon	4,500	...
	Mt. Vernon	Ozark	302,000	537
	Neosho	New-Mac	266,000	735
	Platte City	Platte-Clay	291,000	510
	Poplar Bluff	Ozark Border	221,000	503
	Savannah	Northwest Missouri	270,000	439

Super Expansion does it . . .



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- It isn't necessary to have dirt-free holes when using.

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THIS PHOTO PROVES THE REMARKABLE HOLDING POWER

You've seen the rest, now use the best. Make no mistake . . . The Super Expansion Anchor "holds for keeps". Actually it has the holding power to exceed the strength of the screws that are used. Super Expansion Anchors are the answer for securely holding electrical, plumbing and bathroom fixtures . . . carpeting on concrete or marble floors or stairs. For awning equipment, too . . . for sign supports and similar installations. Be sure and insist on Super Expansion Anchors—

See your jobber . . . or order directly from manufacturer.

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STATE	CITY OR COUNTY	NAME OF CO-OP.	LOAN	NO. NEW CONSUMERS
	Sedalia	Central Missouri	348,000	649
	Sikeston	Scott-New Madrid	296,000	662
	Tipton	Co-Mo	323,000	548
	Trenton	Grundy	252,000	426
MONTANA	Glasgow	Valley County	275,000	195
	Havre	Hill County	585,000	575
	Huntley	Yellowstone Valley	55,000	48
	Hysham	Mid-Yellowstone	20,000	15
	Livingston	Park	65,000	78
	Missoula	Missoula	180,000	161
	Opheim	Northern	115,000	...
	Red Lodge	Beartooth	140,000	140
	Turner	Big Flat	25,000	...
	Westby	Sheridan	50 000	...
NEBRASKA	Broken Bow	Custer County	176,000	...
	David City	Butler County	255,000	342
	Grand Island	Southern Nebraska	360 000	678
	Grant	Midwest	200 000	209
	Hartington	Cedar-Knox County	370,000	571
	Hay Springs	Niobrara	489,000	548
	Lincoln	Norris Rural	325,000	364
	McCook	McCook Public	300,000	294
	Ord	Loup Valley	389 000	630
	Wayne	Wayne County	187,000	377
	York	York County	361,000	654
NEW MEXICO	Artesia	Central Valley	365,000	209
NEW YORK	Bath	Steuben Rural	50,000	225
N. CAROLINA	Asheboro	Randolph	414,500	797
	Beaufort	Carteret-Craven	25,000	100
	Burgaw	Four-County	73,000	...
	Dobson	Surry-Yadkin	50,000	...
	Enfield	Halifax	225,000	454
	Hillsboro	Piedmont	92,000	225
	Jacksonville	Jones-Onslow	44,000	...
	Lenoir	Blue Ridge	50,000	...
	Lenoir	Blue Ridge	360 000	...
	Lexington	Davidson	323 000	649
	Mocksville	Davie	639,000	1,200
	Rich Square	Roanoke	490 000	1,116
	Sanford	Central	50 000	225
	Stedman	South River	50,000	200
	Wadesboro	Pee Dee	441,000	1,298
	Wake Forest	Wake	319,000	809
N. DAKOTA	Bowbells	Burke-Divide	600,000	607
	Carrington	Tri-County	660 000	732
	Dickinson	West Plains	500,000	505
	Grand Forks	Nodak Rural	550,000	519
	Hazen	Oliver-Mercer	500,000	492
	Kindred	Cass County	400,000	533
OHIO	Marietta	Washington	40,000	150
	Marion	Marion Rural	45,000	...
	Mount Gilead	Morrow Rural	50,000	...
	West Union	Adams Rural	233,000	512
OKLAHOMA	Blackwell	Kay	263,000	304
	Cherokee	Alfalfa	274,000	396
	Cordell	Kiwash	61,000	150
	Hugo	Choctaw	50 000	8
	Lindsay	Rural	315,000	323
	Marietta	Red River Valley	46,000	...
	Norman	Oklahoma	264,000	630
	Okmulgee	East Central	352,000	807
	Sayre	Northfork	138,000	200
	Seminole	Canadian Valley	129,000	251
	Stillwater	Central Rural	115,000	100
	Tipton	Southwest Rural	229,000	437
	Walters	Cotton	290,000	509
	Woodward	Northwestern	422,000	563
OREGON	Hermiston	Umatilla	40,000	125
	Roseburg	Douglas County	90,000	...
	Vernonia	West Oregon	190,000	...
PENNA.	Brookville	Jefferson	50,000	200
	Cam. Springs	Northwestern	125,000	290
	Clearfield	Central Rural	32,000	70
	Clearfield	Central Rural	272,000	400
	Gettysburg	Adams	50,000	200
	Huntingdon	Valley Rural	50 000	200
	Parkers Lndg.	Central	269,000	579
	Towanda	Claverack	70,000	125
S. CAROLINA	Abbeville	Little River	206,550	470
	Aiken	Aiken	342,000	698
	Conways	Horry	240,000	540
	Kingstree	Santee	508,000	1,707
	Pageland	Lynches River	50,000	150
	Pickens	Blue Ridge	160,000	499
	Sumter	Black River	177,000	601
S. DAKOTA	Aberdeen	James River Valley	300,000	407
	Alcester	Lincoln-Union	75,000	121
	De Smet	Kingsbury	400 000	556
	Huron	Beadle	585,000	675
	Salem	McCook	300,000	475
	Selby	Cam-Wal	500,000	524
	Wall	West River	80,000	40
TENNESSEE	Centerville	Meriwether-Lewis	376 000	1,141
	Clarksville	Cumberland	600,000	2,417
	Decatur	Volunteer	531,000	1,467
	Halls	Forked Deer	275,000	881
	Jefferson City	Appalachian	350,000	1,448
	Lafayette	Tri-County	82,000	200
	McMinnville	Caney Fork	250 000	921
	Rogersville	Holston	465,000	1,705
	Savannah	Tennessee Valley	567,000	1,400
	Selmer	Pickwick	570,000	2,333
	S. Pittsburg	Sequachee Valley	545,000	1,415
	Trenton	Gibson County	500,000	2,043
TEXAS	Athens	New Era	395,000	840
	Bartlett	Bartlett	152,000	353
	Bellville	San Bernard	190,000	300
	Bracketville	Rio Grande	253,000	413
	Brady	McCulloch County	180,000	250
	Coleman	Coleman County	287,000	403
	Colo. City	Lone Wolf	230,000	411
	Corsicana	Navarro County	50,000	80
	Cost	Guadulupe Valley	25,000	32
	Cuero	Dewitt County	240,000	415
	Decatur	Wise	110,000	150
	Denton	Denton County	85,000	262
	El Campo	Wharton County	115,000	170
	Floydada	Floyd County	105,000	160
	Gilmer	Upshur	230,000	835
	Gladewater	Gladewater	10,000	...
	Karnes City	Karnes	260,000	522
	Kaufman	Kaufman County	40 000	80
	La Ward	Jackson	321,000	648
	Littlefield	Lamb County	100,000	162
	Lubbock	South Plains	358,000	506
	McGregor	McLennan County	182,000	430
	Mart	Limestone County	102,000	266
	Mercedes	Magic Valley	187,000	392
	Merkel	Taylor	223,000	518
	Navasota	Mid-South	255,000	459
	Perryton	North Plains	200,000	243
	Pittsburg	Camp Refrigeration	5,000	...
	Quitman	Wood County	10,000	...
	Quitman	Wood County	100,000	394
	Robstown	Nueces	275,000	478
	Rosebud	Belfalls	145,000	402
	San Angelo	Concho Valley	160,000	227
	Stamford	Stamford	200,000	438
	Stanton	Cap Rock	150,000	193
	Tulia	Swisher County	155,000	199
	Victoria	Victoria County	117 000	527
	Waco	Brazos River	6,713,313	...
	Wellington	Greenbelt	100,000	90
UTAH	Newcastle	Escalante Valley	24,000	24
VIRGINIA	Bowling Green	Virginia	69,000	...
	Chase City	Mecklenburg	576,000	1,497
	Culpeper	Northern Piedmont	80,000	174
	Dayton	Shenandoah Valley	840,000	914
	Livingston	Central Virginia	75,000	360
	Manassas	Prince William	296,000	...
	Millboro	BARC	250,000	1,050
	New Castle	Craig-Botetourt	91,000	182
	Suffolk	Community	169,000	322
	Warsaw	Northern Neck	52,000	200
WASH.	Colville	Stevens County	110,000	173
	Dayton	Columbia County	330,000	253
	Prosser	Benton Rural	350 000	307
	Republic	Public Utility	90,000	72
	Ritzville	Big Bend	215,000	143
WISCONSIN	Adams	Adams-Marquette	230,000	423
	Baldwin	St. Croix County	25,000	150
	Barron	Barron County	100,000	319
	Blk. Riv. Falls	Jackson County	50,000	115
	Blk. Riv. Falls	Jackson	275,000	162
	Centuria	Polk-Burnett	105,000	331
	Columbus	Columbia Rural	155,000	139
	Cornell	Chippewa Valley	150,000	532
	Eau Claire	Eau Claire	150,000	413
	Ellsworth	Pierce-Pepin	55,000	204
	Gays Mills	Crawford	67,000	173
	Iron River	Bayfield	140,000	255
	LaCrosse	Dairyland Power	3,380,000	...
	LaCrosse	Dairyland Power	500,000	...
	Lancaster	Grant	290,000	602
	Menomonie	Dunn County	125 000	506
	Oconto Falls	Oconto	150,000	330
	Phillips	Price	328,000	613
	Phillips	Price	47,000	159
	Superior	Head of the Lakes	65,000	163
	Superior	Head of the Lakes	200,000	166
	Wash. Island	Washington Island	102,870	...
	Westby	Vernon	130,000	405
WYOMING	Cody	Shoshone River	112,000	49
	Powell	Garland Light	40,000	88
	Riverton	Riverton Valley	86,000	82
	Thermopolis	Hot Springs County	60,000	47
	Wheatland	Wheatland Rural	260,000	267

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THE MILLER FLUORESCENT TROFFER LIGHTING SYSTEM for stores, offices, schools, factories, and public buildings is an important advance in lighting. The backbone of this system is the patented Miller Ceiling Furring Hanger which suspends ceilings from the lighting system — does away with laborious fitting of recessed lighting into hung ceilings, cuts needed supports from structural ceiling 50 to 75%. Has its own wireway which reduces wiring costs up to 50% . . . conduit and conduit fitting costs up to 80%.

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- HEATING PRODUCTS DIVISION
- ILLUMINATING DIVISION
- ROLLING MILL DIVISION
- FOUNDRY DIVISION

Mystery of NEWA's Missing Gavel Solved By Famous Sleuth From Bridgeport

John L. Busey becomes detective to solve mystery for NEWA. Investigation extends across six states. Guilty party one of industries leading officials

MEMBERS of the National Electrical Wholesalers Association witnessed the successful solution and climax of the two year old mystery of the missing gavel during their annual banquet recently held in Chicago. The wholesalers were astounded as the facts were revealed concerning this closely-guarded secret.

It seems that John L. Busey, following his election to the presidency of the N.E.W.A., at the conclusion of the 36th meeting in 1944, ascended the platform, stationed himself at the rostrum and reached for the gavel to rap for order. Alas, his groping fingers found nothing—the little wooden mallet was missing.

Mr. Busey, having no wish to alarm the hundreds of loyal members of the association, kept his discovery a secret except from the innermost council of the organization. There was no immediate need to arouse the members. There would be no further use for the gavel at this time since this meeting was over.

But what about the 37th annual convention some two years hence? To stand before the members of the association at that time and rap for order with his fist was a possibility but sooner or later an explanation would have to be made and the wholesalers, who were in the throes of superproduction and selling schedules in behalf of the nation's defense (and offense) were likely to take drastic steps. . . . the culprit might even be tarred and feathered. Also, Mr. Busey had to consider his hand—rapping for five days was likely to be hard on the knuckles.

What to do. As the able leader of the group it was up to Mr. Busey to plan a course of action to meet the emergency. The FBI and Secret Service had their hands full protecting the nation from spies and saboteurs. After considering the problem from all angles, Mr. Busey realized that he, himself, would have to solve the case for the N.E.W.A.

Consequently, Mr. Busey donned his Sherlock Holmes cap and pipe and proceeded to track down the one guilty of such an act. The crime had been cleverly planned and perpetrated. There were no clues or fingerprints. Mr. Busey set up his headquarters in Bridgeport, Conn., and directed the search across six states to Michigan and finally to Chicago where the guilty one was apprehended and unmasked.

In 1944—*A smile and a hearty handshake BUT NO GAVEL!*

After much deduction Mr. Busey decided to consult with past president D. Lyle Fife. Upon thinking it over Mr. Busey recalled that when he succeeded Mr. Fife in office, the latter had given him a smile and a hearty handshake, but no gavel. Mr. Busey decided to find out just what Lyle Fife's left hand was doing while he was shaking hands. Sure enough, upon visiting Mr. Fife's home in Detroit, the missing gavel was found—comfortably resting on the mantel above the fireplace.

Mr. Busey reported his discovery to the officials of the association who, upon recovering from the shock, arranged the purchase of a new gavel, complete with silver band and inscription, which was presented to Mr. Fife during the annual convention banquet. In handing down their decision the judges, alias N.E.W.A. staff, felt that leniency should be shown in that Mr. Fife had an excellent record and had proven himself a capable leader as a past president of the association.

In 1946—*John L. Busey, left, catches up with D. Lyle Fife, retrieves NEWA's gavel and presents token gavel to Mr. Fife in return.*

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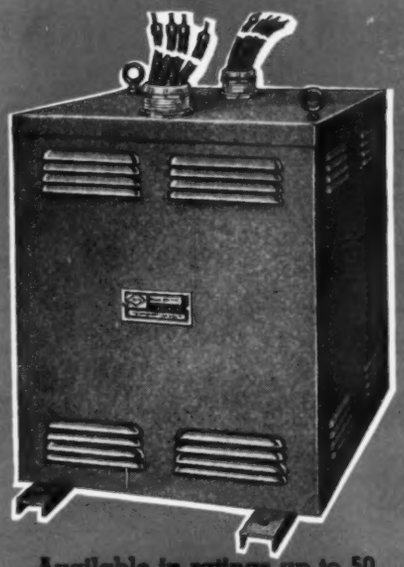

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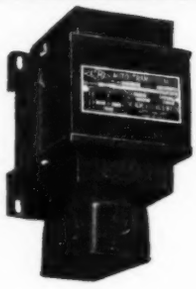
Industrial maintenance and new wiring are still far behind the plans of plant owners. Simplification and economy are now the rule in power and lighting installations. Instead of two separate wiring systems (one for power—one for light) only a power line is installed and lighting circuits tapped off thru Acme Electric air cooled transformers located at the most convenient and practical points. Another economical method is to increase power line voltage to permit using lighter gauge wire for the same load and reducing the voltage thru Acme Electric air cooled transformers at the points of use. Heavy load departments are isolated from effecting other circuits by installing Acme Electric air cooled transformers on circuits which are tied in with the circuit effected by starting load voltage drop.

Acme Electric transformers are preferred for these applications by men who have had the opportunity to compare performance and service life. Acme Air Cooled transformers carry their rated capacity at 55° C. temperature rise. This cooler operation is assurance of longer life, dependable performance. The Acme Electric distributor proposal will allow you to profitably serve this market.

A sturdily constructed, all-steel transformer that eliminates unnecessary non-working weight.



Built for continuous service at 55°C. temp. rise. Provides high efficiency and dependable performance.

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News Notes From N.E.W.A.

By Alfred Byers, *Secretary*
National Electrical Wholesalers Association

N.E.W.A. PROTESTS TO OPA

An informal committee of electrical appliance distributors, invited to do so, began in September of last year to provide OPA with data regarding operating costs. The purpose was to assist that government agency in drawing up pricing regulations which would be practical and realistic.

Since that time a number of regulations have been issued without due regard to actual operating conditions despite the fact that these had been fully presented by this informal committee in several conferences with OPA officials. The result has been a steady decline of wholesalers' margins, because of OPA's price absorption policy, to the point where actual loss is reflected in many of the price ceilings established.

Last month this situation was acted upon by N.E.W.A.'s Management Committee at the time the bill to extend OPA was being debated in Congress. That committee authorized the Association's president and managing director to write to Mr. Paul A. Porter, Administrator of Office of Price Administration, acquainting him fully, in a factual manner, with the untenable situation which OPA had created for the electrical appliance distributors of the country.

The letter was to inform him also of the complete lack of any relief which had resulted from all requests which had been presented and to advise him further that N.E.W.A., on behalf of all appliance distributors, would now proceed with whatever actions it may consider necessary to obtain the relief the industry had to have in order to survive. Copies of the letter to Mr. Porter were sent to President Truman and to Mr. Chester Bowles as head of the Committee for Economic Stabilization.

The Management Committee also appointed an official committee of N.E.W.A. members to carry on energetically along these lines in the interests of the entire industry.

These actions took place just prior to the start of deliberations of the joint Conference Committee of the House and Senate. That Committee is in session as this is being written and the outcome of N.E.W.A.'s efforts is unknown at this time.

PYLE ADDRESSES CANADIAN WHOLESALERS

The Canadian Electrical Distributors Association, since its formation two years ago, has been a keen observer of N.E.W.A.'s activities. They held an important meeting at Toronto, Canada, on June 25th. A principal speaker on their program was N.E.W.A.'s managing director, Charlie Pyle, who was invited to address the meeting on the special features and programs now being so successfully sponsored and operated by N.E.W.A. Mr. Pyle said the meeting was a very enthusiastic one and indicated that our Canadian neighbors, as our own industry, are making great preparations to bring the electrical industry to the fore in postwar Canada.

N.E.W.A. EXECUTIVE STAFF IN FIELD

Extensive field work will be carried on by executive staff members of the Association during the summer. Bob Hill, director of the Appliance Division, will travel throughout the southwest. Charlie Pyle's itinerary, due to headquarters demands for executive duties, is not entirely definite, but he will visit in several areas during the summer period. The writer of this page plans several shorter trips to marketing centers closer to New York.

Conferences with individual members, group luncheons, and visits with non-member wholesalers in the interest of membership are the chief purposes of these trips to be made by Charlie Pyle and his two associates on the executive staff, Bob Hill and Al Byers.

N.E.W.A. DISTRIBUTES TENETS

One of the highlights of the N.E.W.A. Convention at Chicago last April was the membership's adoption of the "Tenets of the Electrical Wholesaler." These have had wide-spread publicity since that time. Attractive copies of the "Tenets," suitable for framing and display, have been prepared by the Association and are being distributed to every member of the organization. The "Tenets" tell the story of just what the electrical wholesaler and specialty appliance distributor do for their manufacturers and their industrial and their dealer customers. That brief message displayed on the walls of members' establishments, will serve to remind the interested reader just how difficult it would be to do business if the services of the wholesaler were not always on tap.

COMMITTEE MEETING SCHEDULE

Plans are now being prepared for another series of meetings of N.E.W.A. committees to begin in September and extend through the

More answers to your questions about *Certified Ballasts*

BUY CERTIFIED BALLASTS, because . . .

1. Certified Ballasts are built to exacting specifications.
2. They're tested, checked and *Certified* as meeting those specifications by famous Electrical Testing Laboratories, Inc.
3. Leading fluorescent tube makers will guarantee lamp performance when Certified Ballasts are specified in fixture.
4. You get good lamp performance, good fixture operation and minimum service worries, when you use Certified Ballasts.

Why *Certified* Ballasts are better

Q. ***How does a Certified Ballast assure good lamp performance?***

A. In all technical characteristics, Certified Ballasts are built to perform a balanced operation with the lamps for which they are designed. All of the features listed below have a definite influence on good lamp performance.

Q. ***What about noise?***

A. Certified Ballasts are quiet in operation. Ballast hum is also dependent on proper installation . . . such as in Certified Fleur-O-Lier and RLM fixtures.

Q. ***What about long life?***

A. Certified Ballasts, properly installed, will normally outlast the entire lighting installation itself.

Q. ***What about heating?***

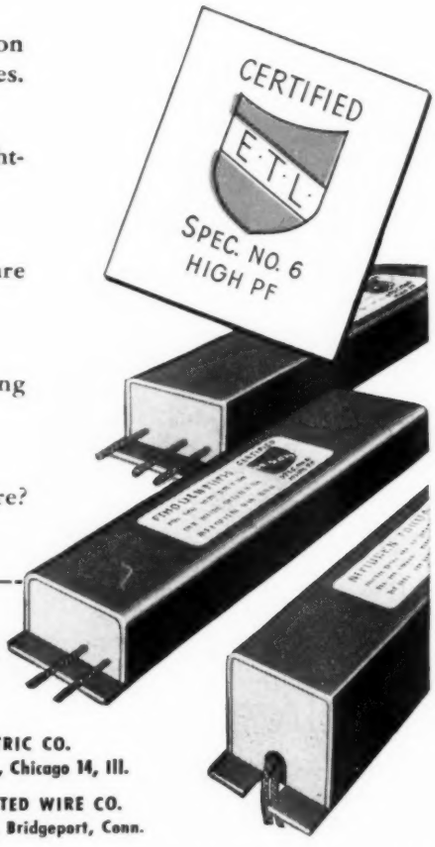
A. Certified Ballast specifications guard against any dangerous temperature rise which might affect operation.

Q. ***What about uniform quality?***

A. Latest manufacturing methods, plus rigid testing by Electrical Testing Laboratories, Inc., assure and guard uniform high quality.

Q. ***What about cost?***

A. Certified Ballasts *cost no more* than any other ballasts. So why not be sure? Look for the ETL Certification mark on the equipment you specify.



Certified Ballast Manufacturers

Makers of Certified Ballasts for Fluorescent Lighting Fixtures

THE ACME ELECTRIC & MFG. CO.
Cuba, New York

CHICAGO TRANSFORMER DIVISION
Essex Wire Corporation
3501 Addison St., Chicago, Illinois

GENERAL ELECTRIC CO.
Speciality Transformer Division
Fort Wayne, Ind.

JEFFERSON ELECTRIC CO.
Bellwood, Illinois

SOLA ELECTRIC CO.
2525 Clybourn Ave., Chicago 14, Ill.

WHEELER INSULATED WIRE CO.
378 Washington Ave., Bridgeport, Conn.

fall and winter months. Included in the series will be a continuance of the highly successful forum meetings conducted by the Planning Committee.

An abundance of valuable information to N.E.W.A. members has been provided through the exhaustive reports prepared by committees during the past year and distributed to all Association members. The forthcoming series of meetings again will develop much new and useful data which members can apply to their own daily operations. Reports will be mailed to members, as usual, after the meeting of each committee.

EXPANDING N.E.W.A.'S VALUE

During the course of the N.E.W.A. Chicago Convention this year, several important suggestions were made with the view to expanding the value of N.E.W.A. to its members. Those suggestions have been incorporated into the Association's present programs to good effect.

This is a noteworthy item of news because it so aptly illustrates and emphasizes the fact that in N.E.W.A. it is the members themselves who "run the show." Its long history of outstanding service to the industry is a tribute to the many members whose constructive and forward looking recommendations have been directly responsible for this enviable record among national associations representing American industries.

Charles Pyle has done much, since he took over N.E.W.A.'s management in 1942, to encourage such contributions by committees and individual members. "You will find few associations," he says, "whose members, in one year, have equalled N.E.W.A.'s record of activities this past year. As a result of members proposals in that time," he continues, "we have in operation for the benefit of all members today a Basic Sales Training Course, a Scientific Personnel Selection Program and an up-to-date Uniform Accounting System for electrical wholesalers to mention only a very few. That," concludes Mr. Pyle, "is voluntary membership cooperation of a high order and one of which any association could be justifiably proud."

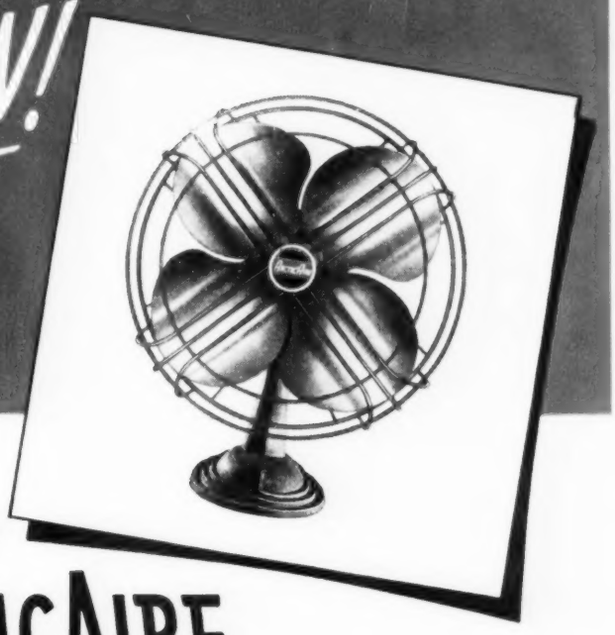
N.E.W.A. LEADS THE WAY—BE A MEMBER

HEAT WAVE SWEEPS NATION

New York, New York—Temperatures soared to new record heights throughout the nation today. Millions slept outdoors in parks and in their backyards to beat the oppressive heat.

No Fans to Sell These Hot Days?

YOU CAN INSURE FUTURE FAN PROFITS NOW!



Tie in with

ARCTICAIRE CONTINUOUS, ALL-YEAR FAN PRODUCTION!

Now is the time for you to plan ahead . . . to protect yourself from a fan shortage next summer. And you can profit by selling fans all year. You can do this by tying in with the *ArcticAire* program of all-year fan production. Accept deliveries of *ArcticAire* fans during the cooler months. **Merchandise them to your Dealers during Fall and Winter. And place your orders for next year NOW . . . F. A. SMITH MANUFACTURING CO., ROCHESTER 2, NEW YORK.

**Initial shipments of *ArcticAire* fans have been allocated among jobbers on a fair basis.

ARCTICAIRE FANS and VENTILATORS

Always a Year Ahead

JOBBERS!

Because

Talk-A-Phone, THE WORLD'S MOST COMPLETE LINE OF INTER-COMMUNICATION IS EXCLUSIVELY A JOBBER'S LINE

. . . so recognized by all front-rank jobbers.

Nationally advertised in leading consumer and dealer publications.

Wide open sales field and wide margin of profit.

Talk-A-Phone is complete from catalog to instructions . . . 5 to 100 stations . . . easy to sell.

Catalog pages available from Jaqua Company, Grand Rapids, Mich., or send us size and receive dummy layout, copy and cuts. (Specify halftone or wood cuts). Address Jobber Catalog Dept.

Talk-A-Phone Co.
1512 S. Pulaski Road Chicago 23, Ill.

NEWS

(*Continued from page* 53)

the line until the final outcome of price controls is decided. In the meantime Washington, too, is waiting—waiting to see what will happen in the business world now that there is no control on prices. OPA officials are also waiting and entertain high hopes of seeing a compromise price control bill emerge from the present situation so that they can keep their jobs. In the event that another price control bill is drawn up and enacted, the OPA officials feel confident that price increases made during the period of no controls can be "rolled-back." This, however, is only in the event that a new OPA bill is passed within the next three weeks.

Philadelphia Distributors Sponsor Training Course

The Electric Association of Philadelphia recently concluded the Basic Sales Training Course with a dinner at the Warwick Hotel, Philadelphia. A total of 394 were enrolled for the course which was started January 28th.

The training course, which was prepared jointly by the National Electrical Wholesalers Association and Edison Electric Institute, was sponsored by 29 wholesalers and distributors who are members of the Philadelphia Electric Association.

Acting as toastmaster for the affair, John A. Morrison, managing director of the organization, greeted the group of 338 members who attended and presented the guest speakers, H. B. Bryans, president, the Electrical Association of Philadelphia and executive vice president, Philadelphia Electric Company, and T. J. Newcomb, sales manager, Electric Appliance Division, Westinghouse Electric Corp., Mansfield, Ohio.

In congratulating the group Mr. Bryans complimented the enrollees on the fact that they had the foresight to improve their sales knowledge during the period when there was little merchandise to sell.

Mr. Newcomb pointed out that the future holds many possibilities for the retail sale of all types of electrical merchandise. He said, "Practically no American home owns an appliance less than four years old, while many millions of essential appliances are more than ten years old."

At the conclusion of the evening certificates of merit were distributed to each enrollee who had completed the course. The success and interest shown in this first presentation of the Basic Sales Training Course in Philadelphia has caused the association to consider repeating it next fall.

Better Light-Better Sight Bureau Restate Objectives

Harry Restofski, chairman of the National Better Light-Better Sight Bureau recently addressed the Lighting Industry Round Table held as part of the International Lighting Show at Chicago.

Mr. Restofski stated that over 15,000,000 pieces of educational material have been distributed by the bureau in furtherance of its program since its organization in 1934. Over 200 various items, such as booklets, folders, films, newspaper advertisements, displays and radio talks are represented in this total, Mr. Restofski said.

"The aims and objectives of the Bureau have not changed since its formation," he said. "The Bureau is the oldest national program in the electrical industry. The Bureau was founded to help eliminate inadequate lighting, one of the main causes contributing to defective vision, by coordinating the promotional work of electric companies, lighting equipment manufacturers, the paint industry and optical interests, and assisting these organizations to use the educational approach in their own respective programs."

Mr. Restofski listed some of the Bureau's contributions to better appreciation of good lighting. He mentioned numerous articles that had appeared in medical journals as a result of data made available by the Bureau.

Mr. Restofski mentioned briefly the present activities of the Bureau, which include a full-color Walt Disney Productions cartoon on the basic fundamentals of light and sight, with a complete package of supplementary materials; a sound slide film entitled "See for Yourself," on the educational aspects of home lighting, and an outstanding sound-slide film on street lighting.

"The Bureau will continue to produce information and materials on the relationship of light and sight, and these will be of real value to those who have lighting products or services to sell," Mr. Restofski concluded.

Mastercraft Electric Moves to New Plant

Irving Skolnick, vice president in charge of sales, recently announced that Mastercraft Electric Company, Inc., had moved to its new plant at 181 Bruce Street, Newark, N. J. The general offices along with the production facilities will be located in the new plant.

Jack Lasser, president, will have complete charge of production. Sidney Blackman will direct all phases of purchasing and Mr. Skolnick will be in charge of sales and market research.

IT's New!
the ROYAL-NOARK RENEWABLE FUSE...
GREATEST ADVANCEMENT IN FUSE DESIGN
IN THE INDUSTRY'S HISTORY!
Write for details
ROYAL ELECTRIC COMPANY, INC.
PAWTUCKET • RHODE ISLAND
ROYAL
...you can even assemble it with your eyes closed!

10,901,861
KWIKHEAT
Salesmen
TO HELP YOU SELL
KWIKHEAT
SOLDERING IRONS...
More than 10,901,861 Kwikheat advertisements are calling on your customers every year . . . in leading radio, electronic, electrical, automotive, aircraft, hardware, manufacturing and maintenance trade magazines . . . creating a large market for you. You can't afford to overlook this hot sales item. Write for details today.
List price_____$11
Extra Tips—Six Styles, each 1.25
0 1 2 3 4 5
KWIKHEAT is best by test
FAST! Hot in Only 90 Seconds
COOL New Protecting Handle
SAFE! Will Not Overheat
POWERFUL (Full 225 Watts)
SAVES TIME—Less Retinning
BALANCED! Easily Handled
DEPENDABLE—Longer Lasting
LIGHT WEIGHT (Only 13½ oz.)
THREADED TIPS For Best Contact
ECONOMICAL In Operation
THERMOSTAT Is Built In
SIX TIP STYLES Interchangeable
FROM TIP TO PLUG . . . IN A CLASS BY ITSELF!
VANATTA
KWIKHEAT
THERMOSTATIC SOLDERING IRON
A Division of
Sound Equipment Corporation of California
3903 San Fernando Rd., Glendale 4, California

Graybar Appoints Two New District Managers

A. H. Nicoll, president, Graybar Electric Company, recently announced the appointment of C. H. McClean and Walter Frazier to the positions of Northern District Manager and Midwestern District Manager, respectively. Mr. McClean will be located at Northern District Headquarters in Minneapolis and Mr. Frazier at the Midwestern District Headquarters in Kansas City. Prior to this change, Mr. McClean was Midwestern District Manager and Mr. Frazier served under him as district sales manager. Mr. McClean replaces E. C. Sharpe, who is retiring after over 34 years of service.

Mr. McClean joined the Graybar Company in 1913. He became credit manager in Kansas City in 1922 and was appointed district manager in 1934. He has always been active in club and association work and among others, has held the following offices in local organizations: President of the Kansas City Association of Creditmen, President of the Electric and Radio Association of Kansas City, Member of the Board of Directors of the Advertising Club of Kansas City, and a member of the Kansas City Chamber of Commerce for the past 13 years.

C. H. McClean

Mr. Frazier also began his career with Graybar in Kansas City. In 1927 he was appointed merchandising manager and in 1934, district sales manager. Mr. Frazier is well known in Kansas City electrical circles and was elected president of the Electrical Association of Kansas City at a meeting last December.

Mr. Sharpe joined Graybar at the age of 19 and has been with the firm ever since. Active in civic affairs as well as the electrical industry, Mr. Sharpe was Mayor of Edina for five years. He is also a member of the board of directors of the Minnesota Rotary Club.

Other changes in personnel in Graybar's Northern district include: Day Harper,

Walter Frazier

former manager of Duluth, has become manager at Omaha; Paul Barker is now manager of the Duluth office; John Peterson, recently returned veteran, is manager of the lamp and lighting department at the Minneapolis office; Harry Hansen, also one of Graybar's returning servicemen, has returned to the service department.

C. W. Kellogg Retires As President of E.E.I.

C. W. Kellogg, president of the Edison Electric Institute, retired as head of the organization June 30, after 43 years of distinguished service to the electric utility industry.

During the course of his career in the industry, Mr. Kellogg served as an operating and a holding company executive and as president of the principal trade association of the electric utility industry.

Mr. Kellogg was born in Philadelphia in 1880 and received the degrees of BS and MS from Massachusetts Institute of Technology in 1902-03.

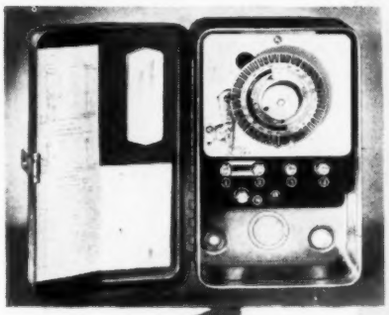
Following his graduation he became associated with the utility concern of Stone & Webster, and remained with that firm for 36 years. During the years with Stone & Webster he was manager of the Edison Company in Boston, Mass., an affiliate; manager of operating companies in El Paso, Texas, and the Gulf Coast area; manager of the Mississippi River Power Co.; and manager of Stone & Webster's Middle West District.

Later he was assigned to the Boston office and was elected president of the Engineers Public Service Company shortly after its organization by Stone & Webster in 1925.

While with the latter company, Mr. Kellogg was part-time, non-salaried president of Edison Electric Institute. After three years as part-time president of the organ-

IT'S EASY!

TO SELL
-install
-operate



Paragon
300 SERIES
NOW 10.75 LIST

Telechron
MOTORED

OPERATING ADVANTAGES

1 Self-starting synchronous operation.

2 Complete self-oiling lubrication by patented capillary oiling system.

3 Years of continuous, uninterrupted operation.

4 Practically instantaneous self-starting at full rated load . . . and other advantages.

300 Series Paragon Time Switches are well known. By the tens of thousands . . . installed in every state and abroad . . . they have made friends through dependable performance . . . have done it for over twenty years. Attractively priced. Widely advertised.

They reduce costs and save valuable man hours through their "Stop Watch" accuracy in controlling ON and OFF time operations on signs, commercial lights, attic fans, stokers, oil burners, blowers, pumps, valves, motors, etc.

Now include many improvements, one of which is the Telechron motor. Easy to install and set. Requires practically no service. Positively not affected by dust. Highest type of design and construction. Offered by progressive supply jobbers at generous trade discount. Write for Complete Catalog.

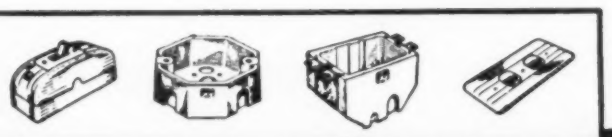
PARAGON ELECTRIC COMPANY
1630 TWELFTH STREET
TWO RIVERS, WISCONSIN

"Mr. TOPS" Paragon Symbol of Top Quality

Paragon Two Rivers WISCONSIN
BUILDERS OF ELECTRICAL EQUIPMENT . . . SINCE 1905

Electrical living is taking big strides ahead in postwar America —with new homes and new appliances. This means a bigger-than-ever load for wiring . . . and greater-than-ever need to *wire adequately* with PORCELAIN Protection!

The contractor makes more money—and the consumer saves money—with PORCELAIN on the job! This system carries a 33% to more than 100% greater load than any other wiring method—wire size for wire size. This extra capacity assures the home owner more economical installation and operation. Ask your Electrical Inspector about non-metallic knob-and-tube wiring for safety. Write for wiring manual.



ADEQUATE WIRING MEANS MORE SALES

PORCELAIN PRODUCTS, Inc.
FINDLAY, OHIO

Wire Today for Tomorrow's Load

ization, the board of directors requested that he take over the position as a full-time responsibility. In 1939 he resigned from his Engineers Public Service position and become the Institute's salaried full-time president.

He has also served as chief consultant of the Light, Heat and Power Unit of the Defense Commission, predecessor of the War Production Board.

Since 1903 Mr. Kellogg has seen the electric utility industry advance from a 1903 total of 583,000 customers to 34,031,073 in 1945; from a generating capacity of 1,212,235 kilowatts in 1903 to 50,102,422 in 1945; from a customer use of 2,507,051,115 kilowatt-hours in 1903 to 222,433,981,000 kilowatt-hours used in 1945 while a steady decrease in rates carried the average cost of current to residential customers from 15.4c per kilowatt in 1903 down to 3.41c for each kilowatt-hour in 1945.

St. Louis Building Program To Total $600,000,000

Almost $600,000,000 will be spent for postwar construction and improvement projects in the St. Louis metropolitan area, according to a report recently issued by the Greater St. Louis Committee on Economic Development, an affiliate of the St. Louis Chamber of Commerce.

Postwar employment in the area will be increased to an estimated 784,000 or 12 percent above the war peak in 1943. The report, which is titled, "Metropolitan St. Louis Blueprints Its Future," and is published in the St. Louis COMMERCE, the official publication of the Chamber of Commerce, estimates the postwar labor force at 831,000, of which 47,000 would constitute an unemployed labor reservoir.

The committees estimates that there will be an increase in manufacturing employment of 100,000 or 60 percent over 1939 in the area which includes St. Louis City and County, St. Charles County, Missouri, and St. Clair and Madison Counties, Illinois. The reconversion plans of established manufacturers call for expenditures totalling $99,415,000, while new industries have announced a total of $62,955,200 for plants and equipment. About $45,000,000 will be spent by retail establishments for new construction and fixtures.

Expenditures totalling $192,894,000 can be expected in the field of public improvements for the St. Louis metropolitan area, according to the report. Financing for one-third of this amount has already been arranged by St. Louis City alone.

Other expected construction and improvement expenditures listed in the report included: public utilities and transportation, $107,838,800; schools, $27,723,550; highways, $17,000,000; hospitals, $11,108,940; housing, $11,000,000; and miscellaneous, $12,771,510.

New Wholesaling Firm Opens in Reno, Nevada

Osborne & Kitchen, Inc., an electrical wholesaling corporation, has recently opened its doors at 145 West Street, Reno, Nevada. The new firm will confine itself exclusively to the wholesaling of industrial electrical supplies and fixtures.

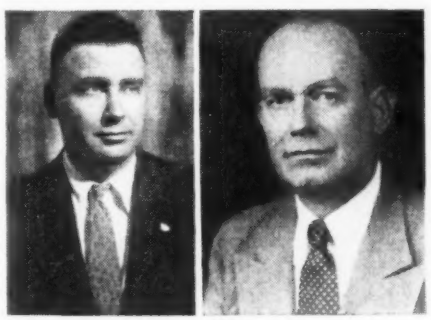
Owners of the new company are R. L. Osborne, Jr. and John E. Kitchen. Mr. Osborne recently resigned as vice president and general manager of Saviers Electrical Products Corporation. He has had 16 years of experience in the electrical industry. Mr. Kitchen was with the U. S. Engineers for 18 years, and during the present war was in charge of $90,000,000 worth of construction in California, Utah and Nevada.

The firm will be located in a new $100,000 steel and concrete building now under construction. The new building will be completely equipped with the latest in modern methods for fast service and maximum efficiency, according to Mr. Osborne. Loading ramps, capable of servicing six trucks at a time, are planned to speed delivery of orders.

Eastern Wholesalers Assn. Elects New Executive

G. V. Weir, managing director, Eastern Electrical Wholesalers Association, recently announced the appointment of Thomas M. Gopsill as secretary and deputy managing director of the association.

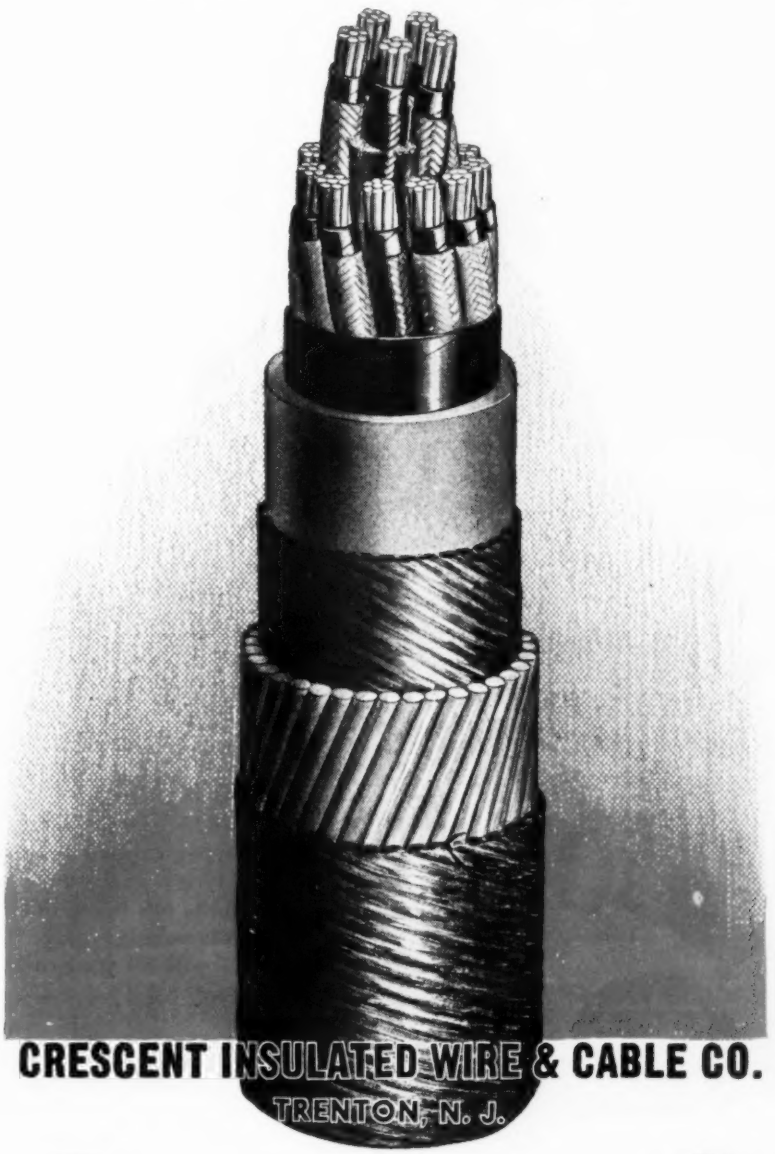
Mr. Gopsill is reported as being active in New Jersey civic affairs and has served five years in the State Legislature. He has been a member of the City Council of Red Bank, New Jersey, for twenty-three years and is now chairman of that body. He is also Police Commissioner of Red Bank.



RECENT APPOINTMENTS at John A. Roebling's Sons Co., Trenton, N. J., include, left, Ferdinand W. Roebling, 3rd, who has been made vice president in charge of engineering, and, right, Charles M. Jones, who has become vice president in charge of public and industrial relations.

CRESCENT
WIRES AND CABLES

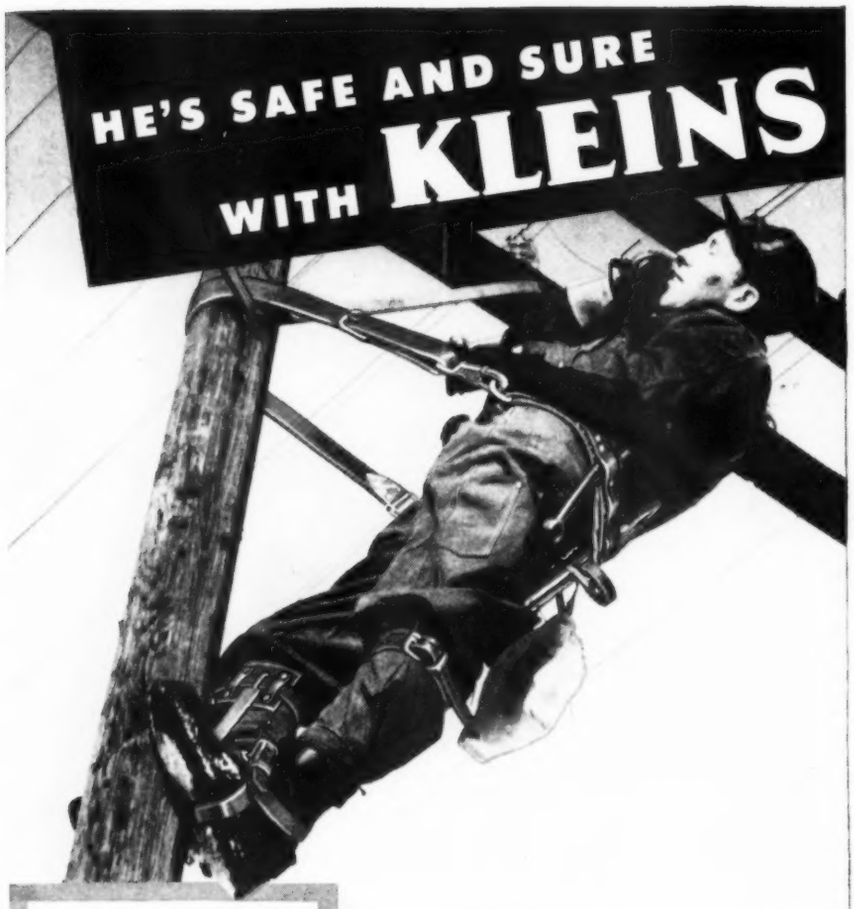
Serving Industry for More than Half a Century

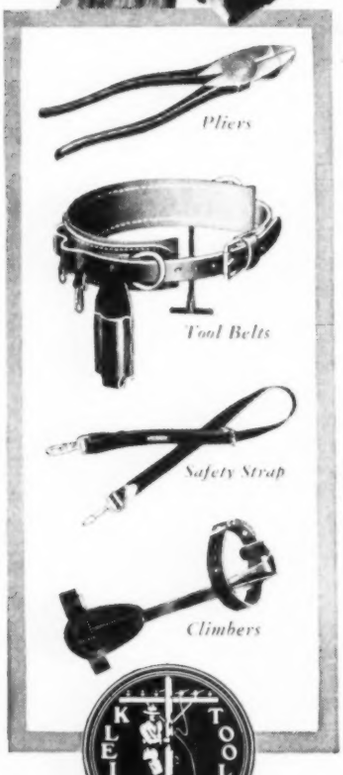


CRESCENT INSULATED WIRE & CABLE CO.
TRENTON, N. J.

Available Through Electrical Wholesalers

NEMA





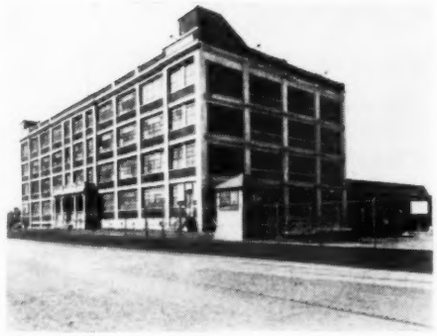
If you've ever worked on a pole fifty feet off the ground—you know why linemen prefer equipment bearing the familiar Klein trademark. For instance:

KLEIN CLIMBERS take him up and down the pole safely—provide sure footing while he works.
"KLEIN-KORD" SAFETY STRAPS provide maximum safety on every job—the Red Center unmistakably signals when the strap should be replaced.
"KLEIN-KORD" TOOL BELTS give the safety, comfort and convenience needed for fast, efficient work.
KLEIN PLIERS help him do any wiring job better and quicker.

The widespread preference for Klein tools and equipment has been developed over the years. "Since 1857," Mathias Klein & Sons has built its reputation on fine craftsmanship and quality materials.

Today, although the full Klein line is in production, demand exceeds supply. However, your supplier will fill your order as soon as possible.

Mathias KLEIN & Sons
Established 1857 — Chicago, Ill., U.S.A.
3200 BELMONT AVENUE, CHICAGO 18, ILLINOIS



THIS MODERN four-story plant, located in New Haven, Conn., was recently purchased by the Silex Company of Hartford, Conn. The Silex plant and property at Circleville was sold and all activities moved to the New Haven building. Larger than the old plant, the new location will provide space for expanded operations.

Wiremold Contest Winners Announced

The Wiremold Company of Hartford, Conn., manufacturer of surface metal raceway wiring systems, recently announced the three big prize winners in its Wiremold Business-Builders "How To Use It" contest. The contest was open to all contractors and electrical maintenance men from October 1, 1945 to March 31, 1946.

The first prize, $500, was awarded to P. M. Pavesich of the Super Electric Construction Company, Chicago. Mr. Pavesich received the award for the Wiremold installation made by his company to provide adequate wiring for fluorescent units in a Chicago railroad office.

G. A. Chamblin of the California Electrical Construction Company, San Francisco, was the winner of the second prize, $250, for his report on the use of Wiremold to wire an 8-story YMCA building.

The third prize, $100, was won by G. A. Schultz of 2931 Mapleshade Road, Ardmore, Pa., for his complete installation of Wiremold No. 3000 and No. 700 in an office building from panel box to fluorescent units and outlets.

The following contestants received honorable mention for their installations: Frederick Latzer, Conduit Wiring Co., New York, using Wiremold No. 2100 for modernization of an old fireproof building; E. J. Boucher, O. B. McClintock Co., Inc., Minn., using Wiremold No. 2100 for test racks for clocks; and Andrew C. Colegrove, Mystic, Conn., who showed various uses of Wiremold No. 3000.

Judges for the contest were: S. J. O'Brien, president, Electrical and Gas Association of New York, Inc., New York; O. Fred. Rost, Editor and Publisher, ELECTRICAL WHOLESALING, New York; Victor H. Tousley, Electrical Field Engineer, National Fire Protection, Chicago; and Laurence W. Davis, general

manager, National Electrical Contractors Association, Washington, D. C.

Contestants were requested to submit layout data, photographs, sketches and detailed description of any Wiremold installation, large or small, in any type of building.

The decisions of the judges were based primarily on the idea of selecting those installations which showed how Wiremold can be utilized in solving certain types of wiring problems, and also demonstrated the wide adaptability and interconnectability of Wiremold in completing a wiring system from panel box to outlets.

Wholesaling Corporation Announces Staff Changes

Harold C. Stott, president of the Elliott-Lewis Electrical Company, Inc., Philadelphia, recently announced changes in the staff of the corporation in furtherance of its program of expanded activities.

Following a meeting of the board of directors of the corporation, Mr. Stott announced that W. A. Muir had been elected vice president in charge of the plant facilities; William B. Leitch has become assistant treasurer; Frank R. Elliott, Jr. assumes full responsibility for the considerably enlarged sales functions. Mr. Stott was elected treasurer in addition to his office of president.

The Elliott-Lewis Electrical Company is located at 1011 Race Street, Philadelphia, and was established in 1905.

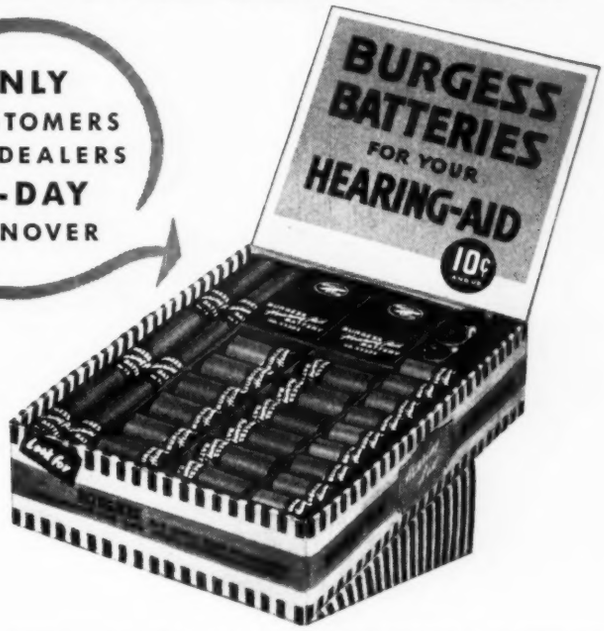
DON JULIEN, vice president, Foster & Davies, advertising agency, is in charge of a new department to give sales, management and advertising service to organized, cooperative groups of manufacturers. Typical of the groups served are the Decorative Lighting Guild, Certified Lamp Makers, Fleur-O-Lier, Certified Ballast and Starter manufacturers. Mr. Julien, formerly advertising manager for Graybar Electric Co., has been with the advertising firm for ten years.

THIS BURGESS ASSORTMENT HAS

REVOLUTIONIZED

HEARING AID BATTERY SALES!

ONLY 5 CUSTOMERS GIVE DEALERS 60-DAY TURNOVER



This Burgess assortment puts hearing aid batteries where they belong—*on your dealers' counter*—for fast, self-service sales! That's why distributors and dealers like it—that's why it set a record in six short months! Your dealers will want to know about this new Burgess profit-opportunity—*give them the story, now!*

BURGESS PRE-SELLS WITH NATION-WIDE ADVERTISING

Monthly ads in *The Saturday Evening Post, Collier's, American Magazine, Better Homes and Gardens, Liberty* and leading farm papers start hearing aid users into dealers' stores. Other ads in *Hearing News* and *Volta Review* constantly build sales for your dealers.

FIND OUT HOW TO BE AN AUTHORIZED BURGESS DISTRIBUTOR

BURGESS BATTERIES

Burgess Battery Company, Dept. 48, Freeport, Illinois

Gentlemen:

Please send us more information on the *complete line* and how we can be a Burgess distributor.

Name_____

Address _____

City_____ Zone_____ State_____

GOODRICH
No. 77
Standlite
PORCELAIN ENAMELED
WEATHERPROOF

The LIGHT
that stands for Speedy Service

You'll see them from the highways—in service stations from coast to coast. For the Goodrich Standlite is a "standout" in the service station field. It is popular because it provides the modern high intensity illumination that indicates click-of-the-heels service—attracts patronage—builds business.

There's more to their popularity than neat appearance. By bringing the light source close to the ground, they provide high efficiency lighting for the entire servicing area around pump islands. And they're easy to install, easy to service.

The Standlite is only one of the many distinctive Goodrich lighting fixtures designed for specific purposes. Whatever your lighting requirements may be, indoor or outdoor, there is a Goodrich fixture to exactly suit your needs. And Goodrich engineers are ready to help you.

RLM

Sold Through Electrical Wholesalers

B.F.GOODRICH
ELECTRIC COMPANY
4600 BELLE PLAINE AVENUE, CHICAGO 41, ILLINOIS

8th Annual Electrical Trade Show Held in Boston

BOSTON—The 8th Annual Electrical Trade Show, sponsored by the Electrical Manufacturers Representatives Club of New England, was recently held at the exhibition hall of the Mechanics building, Boston.

Over eighty booths were set up by manufacturers agents who represent over three hundred manufacturers of electrical products. Entrance to the show was restricted to members of the electrical industry and many, throughout New England, took advantage of the opportunity to see the latest products of the electrical manufacturers.

Although the manufacturers are still keeping undercover many of their new products, the electrical wholesalers, contractors, engineers and others interested in the industry, who attended, were able to talk with the representatives and in some cases, obtain verbal descriptions of new merchandise.

Some of the exhibits were brought from the International Lighting Show, recently held in Chicago, to the Boston Show. An interesting display by the Mass. State Association of Master Electricians featured a program of adequate wiring for electrical contractors in new building projects. The campaign stresses adequate entrances for electrical service, adequate circuit capacity and adequate provisions for outlets, lights and switches.

Concerns and manufacturers representatives who had exhibits included: Allen Bradley Co., Allis Chalmers Mfg. Co., Robert H. Anthony Co., Appleton Electric Co., Arrow-Hart & Hegeman Electric Co., Barnard-Adams Sales Co., Boudrot & Gardside, Ray F. Brown, Bryant Electric Co., H. P. Carrier, Champion Lamp Works, Clark Controller Co., J. F. Collins, Harry M. Condit, Jr. Co., Copley Sales Co., J. J. Costello Co., S. H. Couch Co., Inc., Curtis Lighting Co.

Also Cutler-Hammer, Inc., Walter E. Daw, Diehl Mfg. Co., Dorn Equipment Co., Eastern Appliance Co., Eastern Fixture Co., Edwards & Company, Electrical Agencies, Inc., William H. Etzell, John W. Fay, Almon Foster, Frank W. Garner, G.E. Company, Richard A. Harris, Philip Holmes, Martin C. Horowitz, Harvey Hubbel, Inc., Arthur J. Hurley, Ideal Industries, Inc., International Association of Electric Inspectors, W. H. James, H. G. Johnson Co., Kelek Co., Stafford J. King, Harry Kramer, Lewis, Norman & Co., Line Material Co., Litecontrol Co., H. W. MacLeod Co., Mass. State Association of Master Electricians, George D. Montgomery, Harry F. Myers, National Electrical Manufacturers Association, National Electrical Products Corp.

Also New England Telephone & Telegraph Co., Ohio Carbon Co., The Okonite Co., Randolph Osborne, Palmer Electric & Mfg. Co., Blair H. Parker, Paynter-

MacPherson, C. C. Pierce Co., Plymouth Rubber Co., Robbins & Meyers, Inc., Rockbestos Products Corp., Service Sales Corp., Simplex Wire & Cable Corp., William O. Simpson, James J. Slater, A. L. Smith Iron Co., Square D Co., Howard A. Squires, James H. Sullivan, Sylvania Electric Products Corp., R. W. Symonds, Thomas & Betts Co.,Trumbull Electric Mfg. Co., United States Rubber Co., Joseph Victor, Wadsworth Electric Mfg. Co., A. Waitzkin, Westinghouse Electric & Mfg. Co., Wheeler Reflector Co., Charles D. White, Robert R. Yusen.

Petroleum Electric Supply Assn. Elects Wholesalers

Fred Cummings, Graybar Electric Company, Inc., Tulsa, Okla. was elected president of the Petroleum Electric Supply Association at the closing business session of the 18th annual conference of the association and the Petroleum Industry Electrical Association recently held in Tulsa.

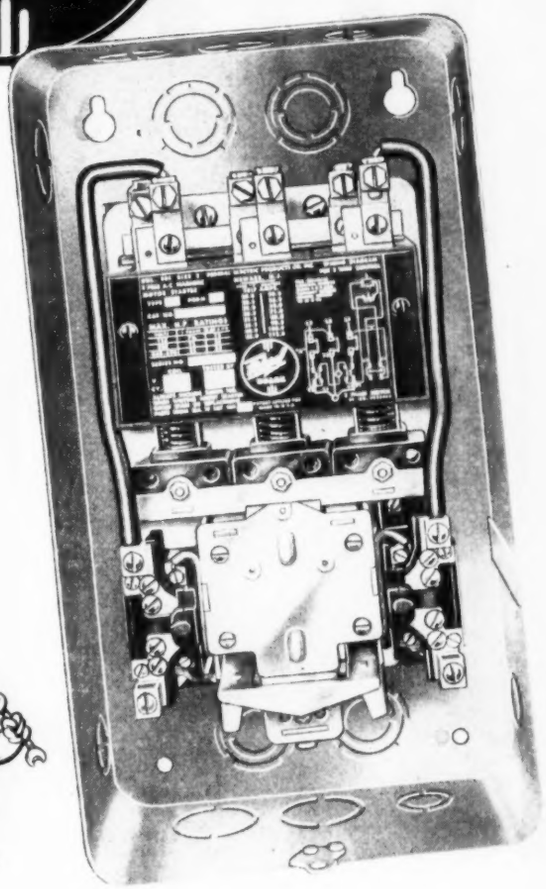
E. C. Lyle, Westinghouse Electric Supply Company, Houston, was elected vice president of the supply group and chairman of the arrangements committee for the next conference to be held in Houston in 1947.

W. H. Streuve, chief consultant, Oklahoma Gas & Electric Co., Oklahoma City; R. G. McCarthey, engineer for Marsh & McClennan, Tulsa; Daniel E. Noble, Galvin Manufacturing Corp., Chicago, and C. E. Davies, Western Union, New York, presented papers at the 18th annual conference.

ARRIVING TOO LATE for the convention section in the last issue was this picture of Harold W. Dyer, left, Dyer-Clark Co., Lawrence, Mass., and Tom Nolan, veteran sales manager of Edwards & Co., Norwalk, Conn.

Federal NOARK

SIZE 3
MAGNETIC
MOTOR STARTER



For man-size jobs of stop-and-go
Without a bit of care or woe
This starter really fills the bill . . .
A fine example of Federal's skill!

Sets a new standard of ease and speed in replacement of any stationary or moveable contacts. Coil replacement in a few seconds without disturbing line or load connections. Greater compactness, yet more ample wiring space. Silver contacts on all current interrupting points. Exclusive vertical ball-bearing operation for highest speed solenoid action. Overload relays, combination hand or automatic reset, for dependable protection.

FEDERAL ELECTRIC PRODUCTS COMPANY, INC.
EXECUTIVE OFFICES: 50 PARIS ST., NEWARK 5, N. J. PLANTS: HARTFORD,CONN. NEWARK, N. J.

FULLMAN Latrobe PRODUCTS

FLOOR BOXES ★ WIRING SPECIALTIES

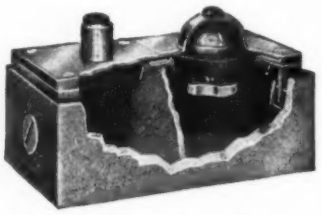
FULLMAN MANUFACTURING CO. QUALITY AT LATROBE SUPREMACY LATROBE, PA.

Latrobe Products are Easy to Install and Easy to Sell

Quick installation means time and labor saved. But the best thing after all about Latrobe Products is their long, efficient service.

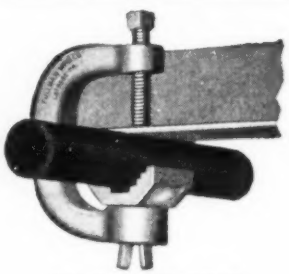
No. 110 "Latrobe" Watertight Box

Sturdy iron box with 3½" round Brass Cover Plate. No. 208 Receptacle and No. 207 Ball Nozzle.



No. 252-R Floor Box

Here is a Two Gang Box with No. 208 Receptacle in one section. One Cover Plate has ½" Brass Plug and one has 2" Brass Plug.



No. 470 "Latrobe" Pipe or Conduit Hanger

A most convenient device for hanging pipe or conduit ½", ¾" and 1" to steel beams up to ⅜" thick—or for use as ground clamp.

"Bull Dog" Insulator Support

Efficient for fastening porcelain or glass insulators to exposed steel framework.

Keystone Fish Wire

Flat and of high quality properly tempered steel.

FULLMAN MANUFACTURING CO.
LATROBE . . . PENNSYLVANIA

Salsbury Appointed to New Position at Wesco

R. W. Clark, president, Westinghouse Electric Supply Company recently announced the appointment of David M. Salsbury as executive vice president. Mr. Salsbury, formerly vice president and general manager, will succeed Walter Williamson, who has retired.

David M. Salsbury

FOR
IMMEDIATE SHIPMENT
JACKSON
VAPOR PROOF UNITS
now made in Aluminum

No. 2800-2804 No. 2802

- No. 2800 has a cast aluminum hood tapped for ½" pipe. For 60-100 watt lamp.
- The 2804 for 150-200 watt lamp.
- The 2802 is an outlet box type and can be mounted on either a 3¼" or 4" box. For 60-100 watt lamp.
- Sold only thru Electrical Wholesalers.
- Manufacturers of Lighting Equipment.

JACKSON
ELECTRICAL COMPANY
900-910 W. Van Buren St., Chicago 7, Ill.

Mr. Salsbury has been in the electric supply business since 1915 when he joined the Northern Electric Company, Calgary, Canada. He joined the Electric Railway and Manufacturer's Supply Co., San Francisco in 1918 after having been associated with two electric companies in Oakland and Fresno, California.

Mr. Salsbury joined Westinghouse Electric Supply Co. when the latter purchased the Electric Railway and Manufacturer's Supply Co. in 1920. During his association with WESCO, Mr. Salsbury has been branch manager in the Salt Lake City office and manager of the North Pacific district. In 1943 he was appointed general manager of the supply company and the following year was elected vice president.

Mr. Salsbury has long been active in the National Electrical Wholesalers Association, and has served as chairman of the Atlantic division and as a member of the management and executive committee.

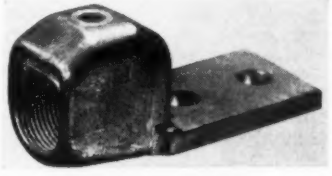
Survey Shows Public Against Utility Strikes

NEW YORK—The results of a survey recently conducted by the magazine ELECTRICAL WORLD revealed that the public believes utility workers should not be permitted to strike. According to the sur-

Frankel

RANGE LUG

- Seven sizes of RANGE LUGS connect cables ranging in sizes from 1,000,000 CM to No. 8 wire.
- Cast of electrical bronze, FRANKEL RANGE LUGS embody high strength, compactness and excellent electrical characteristics, and are Underwriter approved.
- RANGE LUGS can also be supplied as 45° and 90° angle lugs.
- RANGE LUGS can be furnished for two, three, and more cables in straight as well as 45° and 90° angle lugs. These are called MULTI-RANGE LUGS.



Bulletin on request

FRANKEL CONNECTOR CO.
25 Vestry Street • New York 13, N. Y.

AUTH ALARMS ARE RIGHT

for those who want to know what's wrong!

FIRE ALARMS

Underwriters-approved, Auth fire alarms include general alarm systems; pre-signal alarms; common code, general alarm; pre-code, continuous alarm; city connected; and open circuit systems. Stations and gongs or chimes can be selected from the Auth line to suit any application. Bulletion No. 70.

BURGLAR & HOLDUP ALARMS

The proper combination of Auth gongs or sirens, foot-rail switches or any of the bank alarm buttons, and Auth control panels, gives your customer the protection he needs—with Auth dependability. Bulletin No. 55.

See Bulletin No. 60 for a wide selection of burglar alarm contacts. Consult Auth engineers for wiring and engineering information.

INDUSTRIAL ALARMS

There are many places in industry where Auth alarms can spot trouble before damage is done. Typical are boiler pressure, circulating water, oil pressure, motor temperature, and air pressure alarms. When pressure, temperature, liquid level, or similar switches find something wrong, a signal is immediately relayed to the Auth supervisory alarm panel with both visible and audible indication. Ask our engineers for suggestions and technical details to fit your requirements.

1-Y

AUTH ELECTRICAL SPECIALTY COMPANY, INC.
422 EAST 53rd STREET NEW YORK 22, N. Y.
Offices in AUTH Principal Cities
SINCE 1892

TOASTSWELL HAS 2 FULLY AUTOMATIC CONTROLS!

TOASTSWELL is the toaster with two fully automatic controls—a Silent Clock and a Thermostat. In TOASTSWELL, therefore, you get the maximum degree of accuracy and dependability. TOASTSWELL eliminates guesswork—assures fully automatic, accurate toast-making.

TOASTSWELL is unsurpassed in beauty, performance and dependability. And it makes better, more uniform toast, with a delicious, sealed-in flavor!

Also TOASTSWELL Sandwich Toaster, Food Warmer, Waffle Baker.

THE TOASTSWELL COMPANY
620 Tower Grove Ave. • St. Louis 10, Mo.

Toastswell
EITHER WAY YOU LOOK AT IT "TOASTS-WELL" OR "TOAST-SWELL"
★ America's Best ★

vey results, utility workers should receive wage increases as high as those paid in other industries, even if it means the consumer must pay a higher rate. In the event that a strike does occur, the majority think the government should take over immediately and operate the utility.

Further, the results of the survey showed that the public believes: utilities are fair in dealing with their employees; utility workers are paid the same as, or more than, factory workers; the blame for disturbed labor relations can be laid at the door of labor leaders more often than at the door of management; a utility workers' union is more to be censured for violating a labor agreement than the company; cooling off periods and fact finding will help prevent utility strikes, but, all threatened strikes should be arbitrated.

Nearly 2,000 persons were interviewed by ELECTRICAL WORLD in its efforts to determine the attitudes of electric utility customers. Interviews were confined to areas where work stoppages have occurred or have been threatened.

Cutler-Hammer, Inc., Establish New Office

Cutler-Hammer, Inc. recently announced that a new office had been established in Rockford, Illinois, metal and woodworking machine tool center.

The new office will be located at 1404 North Main Street and will be under the direction of G. I. Wolff. Mr. Wolff has been located in the Rockford territory for 19 years. R. E. Ford will be resident sales engineer.

ATTENDING THE FORMAL OPENING of the new display room of George C. Stafford & Sons, Laconia, N. H., wholesaler, are: Left to right, Edward H. Grant, N.E. district manager, Proctor Electric Co.; Ralph Morin, Charles F. Stafford, Willard Martin, Paul Kinney, Miss Barbara Lyman, Theo Stafford and John McIntyre, George C. Stafford & Sons; A. H. Turner, D. L. Sanford Co.; William Stafford; Robert Lougee, secy., Chamber of Commerce; Frank Dewey, Gibson Refrigerator Co.

PROFITABLE
Opportunities for you *with*
AUTOMATIC TIME CLOCKS

Window Lights . . . Electric and Gaseous Tube Signs . . . Apartment and Hotel Hall Lights . . Billboards . . . Flood Lighting . . . Poultry House Lighting . . . Linotype Machines . . . Pumps and Motors . . . Electric Refrigerator Defrosting . . . Time Lock Safes and Vaults . . . Street Lighting Systems . . . Traffic Signals . . . Signal and Alarm Systems . . . Appliance Outlets . . . Water Softening Equipment . . Advertising Displays . . . Ventilating Systems . . . Attic and Exhaust Fans . . . Electric Fountains . . . Air Conditioning Equipment . . . Electric Hot Water Heaters . . . Compressors . . . Oil Well Pumps . . . Battery Charging . . . Sprinkling Systems . . . Airport Lighting . . . Church Bulletin Boards . . . Dioramas . . . Coal Stokers . . . Time Signals . . . Chemiculture . . . Paint Agitators . . . Blowers . . . Yard Lighting Systems . . . Bulletin Boards . . . Heat Treating . . . Panoramas . . . Conveyors . . . Suburban Railway Station Platforms . . . Chime Systems . . . Electric Cookers . . . Factory Lighting . . . Electric Glue Pots . . . Park and Playground Lights . . . Gas and Oil Heating Equipment . . . Plastic Molding . . . Solenoid Valves . . . Greenhouse Lights.

Write for Information and Discounts

AUTOMATIC
Electric Manufacturing Co.
TIME SWITCHES—FLASHERS
MANKATO • MINNESOTA

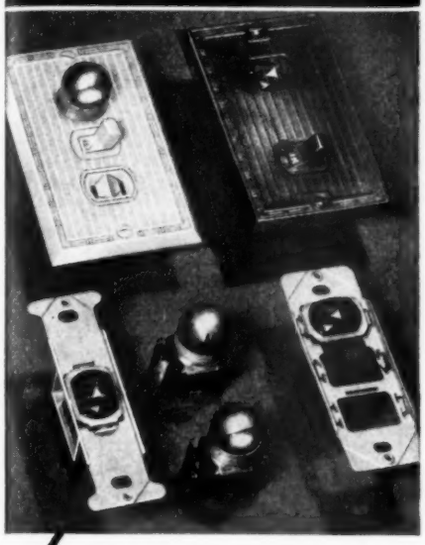
SOLAR "SHOCKPROOF" *Renewable* CARTRIDGE FUSES

Steady year-'round profits with Solar Shockproof Renewable cartridge fuses. A continuous sales increase of these top-flight money-saving fuses over a period of years is proof positive that Solar are the preferred Cartridge Fuses everywhere. Get into the Solar Profit Parade today.

Send for Bulletin B-7

SOLAR ELECTRIC CORP.
WARREN • PENNSYLVANIA
SALES OFFICE:
110 WILLIAM ST., NEW YORK 7, N. Y.

P&S PILOTS



THE WAY TO

SAFETY
ECONOMY

Versatile — compact — suitable for a variety of installations — P&S Pilot Lights illustrated may be combined with P&S-Despard switches or outlets under a single gang plate.

Flush type available with red, green, blue, amber or opal jewels — Hooded type with red or clear lamps.

Also note Night Light unit which permits installation of switch-controlled night light in single gang with switch or outlet.

Consult your P&S Catalog if you have a pilot light problem.

Sold Thru ELECTRICAL WHOLESALERS

PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK

GE Appliance Dept. Has Three New Plants

H. L. Andrews, vice president in charge of General Electric Company's Appliance and Merchandising Department recently announced that three new appliance and construction materials' manufacturing plants have been leased by the company.

A 60,000 square foot plant at Saugerties, N. Y., is already in the production of fluorescent lampholders and fluorescent starters. The work of setting up a 14,000 square foot factory to produce heating pads was started June 1 at Coxsackie, N. Y.

A combined appliance service center and attic fan factory has been established at Dallas, Texas, in a 15,000 square foot building. The Texas plant is the first appliance repair station in the Southwest for General Electric and will handle servicing of small GE appliances and will carry a full line of parts for all GE appliances.

Approximately 600 persons will be employed in the three new plants.

OBITUARIES

R. M. Gaynor

Rex M. Gaynor, treasurer and merchandising manager of the Walker-Jimieson Co., Inc. died in Chicago in the tragic La Salle Hotel fire, June 5.

Mr. Gaynor was one of the founders and an executive of the wholesale house of Walker-Jimieson, Inc. He was married and lived in Elmwood Park, a suburb of Chicago. He was 32 years old.

ASSOCIATION NEWS

CHICAGO—The Radio and Appliance Dealer Group of the Electric Association of Chicago held a meeting on March 29 in the Commonwealth Edison Assembly Hall to discuss Radio and Appliance Servicing and Repairs.

This meeting was under the direction of Mr. T. C. Dick, superintendent, Appliance Repair Division, Commonwealth Edison Company. Among the subjects discussed were "Types of Appliance Servicing," "Various Operations Peculiar to the Servicing of Particular Appliances," and "Special Machinery and

Type HL-50 Weatherproof Socket

MOLDED BAKELITE
WITH PATENTED THREADED SHANK

HL-5 with plain shank

HL-50 with threaded shank

HL-50 molded weatherproof socket is unusually useful in many types of permanent or temporary installations. Standard guards and reflectors with 1½ inch fitter can be attached. Leads are permanently molded in the bakelite body. The ½ inch pipe threaded shank molded integral with the body is a patented feature that permits mounting in Pylet conduit hubs, steel knockout boxes, rigid conduit couplings, or in ¾ inch garden hose. The threaded shank seals the installation. Use Type HL-50 indoors or out, for portable hand lamps, cluster lights, lamp or attachment plug outlets, and any similar work needing a rugged, heavy duty outlet.

Also made as Type HL-5 weatherproof socket without pipe threaded shank.

Consult your Pylet Catalog 1100 for complete listings.

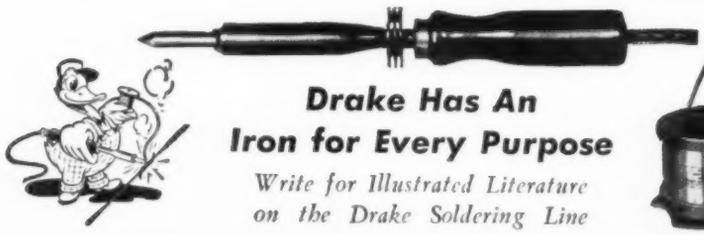
THE PYLE-NATIONAL COMPANY
1344 N. Kostner Avenue, Chicago 51, Illinois

You Recommend Dependability

when you suggest

DRAKE SOLDERING IRONS AND SOLDER POTS

You can count on *complete* customer satisfaction from DRAKE Soldering Irons. Backed by 25 years of soldering iron manufacturing experience DRAKE Soldering Irons have built a reputation for quality that makes them *distinctly preferred* by fast-producing American industry.

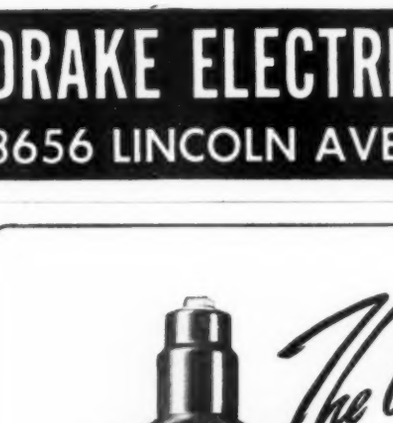


Drake Has An Iron for Every Purpose

Write for Illustrated Literature on the Drake Soldering Line

DRAKE ELECTRIC WORKS, INC.

3656 LINCOLN AVE · CHICAGO 13, ILL.



The Old ReliABle

ABolite is a name known for many years in the industrial lighting field for reliability, correct design and efficiency.

FORMED NECK RLM DOME TYPE REFLECTOR

Standard ABolite reflectors also made in Easy Detachable and Separable Socket types for every kind of industrial lighting.

Floodlights and gas station island lights also available.

ABolite reflectors are made in one of the major plants producing highest quality porcelain-on-steel enameled products.

These durable, easy-to-clean reflector units are made to comply with RLM standard specifications. This label is your assurance of highest quality and dependable performance.

ABOLITE

For the best in industrial lighting, stock, recommend and use ABolite — the old ReliABle.

Sold exclusively through electrical wholesalers. Order from your regular supplier.

Light right with . . . ABolite REFLECTORS PORCELAIN ON STEEL

THE JONES METAL PRODUCTS CO., West Lafayette, Ohio

Equipment to be Found the Modern, First-Class Appliance Servicing Establishment." According to Mr. Dick, an efficient repair department rounds out the service a dealer can offer his trade and not only can it be profitable in itself but will earn worthwhile friends, contacts and customers.

Mr. Dick used still films taken in the Commonwealth Edison repair shops to better show the equipment needed for service work and also the types of jobs handled. This shop has lathes, presses, buffers, etc., to make up parts which are unobtainable. They have two buffing wheels—one buffer and one polisher—drill presses, compressed air for cleaning bake ovens, etc., brazing torches, spray guns and other tools. Mr. Dick stated that some items such as armatures and electric shavers were quite specialized and should be sent to the specialists of these items.

Among the table appliances repaired in the C. E. shops are telechron clocks, vacuum cleaners, range timers, fans, irons and elements, waffle irons, roasters, motors, etc. Also, all major appliances such as radios, refrigerators and water heaters are repaired. Every repair job is completely cleaned, painted and thoroughly tested before returned to the customer.

Mr. William T. Reace, vice president of sales at Commonwealth Edison and president of the Electric Association, stated that the Utility Company maintained the repair department only as a service to the customers and would much prefer all work to be handled by the local dealers. He further stated that the Edison Company through the Electric Association had made plans to train, assist and encourage the dealer group to efficiently prepare their individual organizations to handle the repairs for their own customers.

CHICAGO—The Electrical Maintenance Engineers of the Electric Association of Chicago recently held their golf tournament and dinner at the Cog-Hill Country Club, Lemont, Ill. The tournament started at 11:00 in the morning and prizes were awarded to the winners during the dinner festivities.

DETROIT—The members of the Electrical Association of Detroit look forward to a pleasant as well as educational trip to Nela Park, Cleveland, where they will visit GE's lighting plant. At Cleveland the GE boys will furnish transportation from the D & C boat out

to Nela Park. Interesting talks on lighting will be given by Nela Park men and refreshments will be served. About three in the afternoon, GE will furnish the transportation back to the boat. Then, until 11:00 when the boat leaves for Detroit, everyone will be on his own.

KANSAS CITY—The Electrical Association of Kansas City recently held its last luncheon meeting for the season until next September. The meeting was held in the Senior Ballroom of the Hotel President where Dr. Phillips Thomas, research engineer, Westinghouse Electric Corp., spoke on the subject, "Adventures in Electricity."

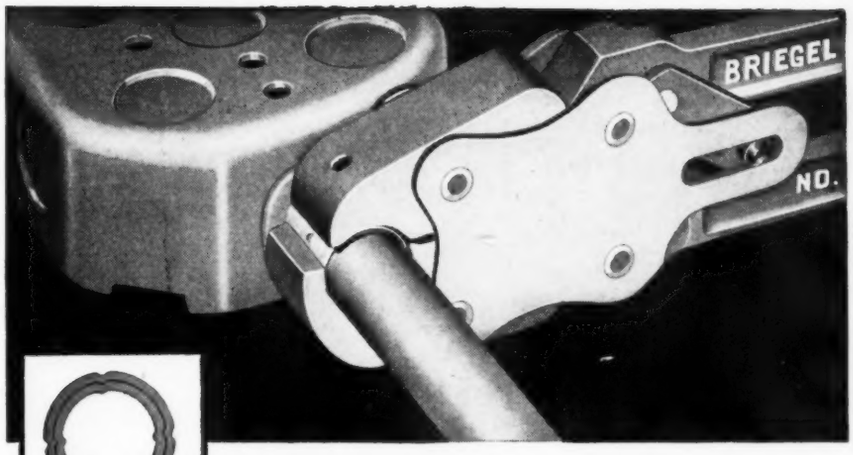
PHILADELPHIA—The Electrical Association of Philadelphia since the beginning of the war has sponsored a series of advertising programs in the four daily newspapers. The newest series, started April 22, will continue for six months, the schedule terminating in mid-September. The theme of this current phase of the activity is "Electric Living," and some of the major electrical appliances will be stressed. Through this advertising the Association reminds the public that the much wanted electrical appliances will soon be forthcoming.

Wiring Certificate Awarded

In line with the Electrical Association's campaign for modernized wiring as the basic step toward "Electric Living," the Association is awarding certificates to builders who install in their homes wiring which meets the "Standards of Residence Wiring" set up by the Association.

This certificate assures that the pur-

CONRAD J. GETTLER, builder of "Sunnybrook," Oreland, Pa., receives the first certification of modern wiring from John A. Morrison, managing director of the Electrical Association of Philadelphia. P. M. Alden and Joseph W. Waters, both of Philadelphia Electric Co., look on.



Cross section Showing Indentations.

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TWO QUICK SQUEEZES give you Finer, Faster Conduit Connections. B-M Fittings do away with the twisting, turning and tightening of nuts and save you valuable time and materials. Then too, they are stronger, neater and much easier to work with in tight places. Start using B-M Fittings today. Have more satisfied customers—more profits from each job!

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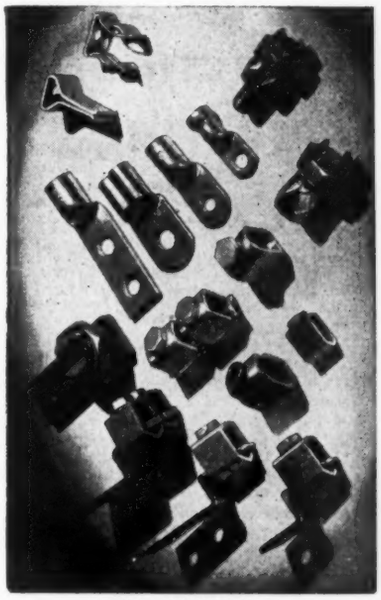

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Due to the 99% pure electrolytic copper drawn right in our plant from seamless copper tubes . . . **Even with Overload You'll Get 100% Satisfaction.**

Please send details and 48-page illustrated catalog.

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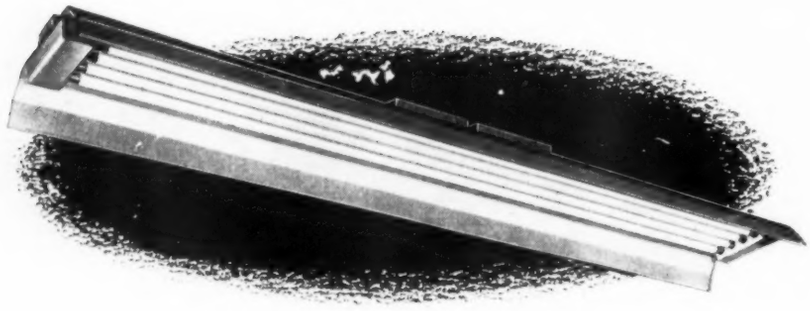

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Here is the new Colovolt industrial fixture, one of a complete line of industrial and commercial "packaged" units. Equipped with the standard 93" Colovolt 10,000 hour lamp, Colovolt fixtures may be used singly or in continuous line lighting in multiples of 8 feet. Instantaneous starting, no flickering, guaranteed for 1 year except for failure due to breakage are extra advantages of the Colovolt Cold Cathode low voltage fluorescent lamp. The long life expectancy of Colovolt lamps may be realized even when constantly turned on and off, and *pre-scheduled re-lamping, with no loss of production or time, is now possible with Colovolt installations.*

*Trade mark registered U. S. Pat. Off.

Contact your electrical wholesaler or jobber, or write us for full details and prices.

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Dependable and Complete Soldering Equipment.

Write Today for Complete Information on the Esico Line

Here is a line covering everything needed for the modern plant which calls for Electric Soldering Equipment.

Factories clamor for it, when once called to their attention, for it's a FAST-MOVING LINE.

Dependably, substantially built, securing customer good-will, and resales.

Includes Electric Soldering Irons listing from $5 to $12.25; Soldering Machines $7.50 to $15; Soldering Iron Temperature Control Stands, and other related specialties.

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ESICO SPOT SOLDERING MACHINE

A real time-saver. Treadle-operated. Automatically advances iron and solder, leaves operator's hands free for work.

SOLDER POTS

ruggedly constructed pots of varous sizes designed for continuous operation and so constructed that they are easily and quickly serviced, should elements have to be replaced.

ESICO SOLDERING IRON CONTROLS

Positive TIP control prevents overheating—tip cannot fall below soldering temperature. The only practical method of controlling heat in the tip—an exclusive ESICO feature!

ESICO ★Reg. U.S. Pat. Off.

ELECTRIC SOLDERING IRON CO., INC.

2846 W. Elm St. Deep River, Conn.

chaser of such homes will get a well planned and engineered wiring system capable of providing adequate and efficient electric service.

Recently John A. Morrison, managing director of the Association, awarded the first of these builders' certificates to Conrad J. Gettler.

NEW ORLEANS—At the recent "Contractors' Night" dinner meeting of the Electrical Association of New Orleans, Miss Frances Armin, director of Consumers Education, National Adequate Wiring Bureau, addressed a large gathering on the subject "The Key to Electrical Living." The meeting was held at the St. Charles Hotel and there were present, as special guests, many architects, general and specializing contractors, and members of other branches of the electrical industry.

Miss Armin said the success of every firm, every individual, associated with the electrical industry depends in part on immediate and aggressive promotion of adequate wiring. She explained that the Bureau functions to co-operate with every firm, every individual, engaged in the manufacture, distribution, installation and servicing of electrical equipment and appliances. The greater the co-operation and wider the promotion of the program, the greater the benefits to those in the industry and to the public.

The Illuminating Engineering Society's annual "President's Night" dinner meeting was recently held at the Jung Roof. A. F. Wakefield, president of F. W. Wakefield Brass Co., Vermilion, Ohio, and president of I.E.S., was the principal speaker. He gave the local chapter his plans for the coming year. Mr. Wakefield pointed out that the membership of the society is now over four thousand, an increase in the last ten years of over 300 percent.

Of interest too at the meeting was the address given by D. R. Bradley of St. Louis, on "Glare," its effect and the permissible amount that may be allowed. He pointed out several very interesting and important facts about school room lighting.

Better Living Appliance Contest

The judges chosen for the Better Living Appliance Contest were Dr. Harold J. Heck, professor of commerce and finance, Loyola University; Miss Violett O'Reilly, principal, L. E. Rabouin Vocational School; and Professor Ross M. Trump, assistant dean, College of Commerce, Tulane University.

As of May 16, over 1500 entries were received. It is interesting to note that the order of preference for appliances so far received, is as follows (only first seven choices are listed): 1—refrigera-

tor; 2—automatic washer; 3—conventional washer; 4—radio-phonograph combination; 5—dishwasher, sink and garbage disposer 6—dishwasher; 7—ironer.

ROCHESTER—Members of the Electrical Association of Rochester recently attended an electrical industry dinner at the Chamber of Commerce to hear N. J. MacDonald, vice president of Thomas & Betts Co., talk on business trends as applied to the electrical industry.

This was one of a series of meetings sponsored by the Association for purposes of keeping the entire industry in this area informed on current business trends—electrically.

At a recent Chapter meeting of the National Electrical Contractors Association of Rochester, officers for the year were elected—Ray Hornbeck, president; Al Mueller, vice president; Earl Driscoll, treasurer; and Ed Vanderlinde, governor.

MORE FACTS ON PRODUCTS

Coffee Brewing Equipment—An 8-page folder, No. 107-R, issued by the Cory Glass Coffee Brewer Co., Chicago, Ill., describes and illustrates the various types of electric and gas heating elements, coffee makers, dispenser parts, and hot water tank especially designed for restaurant and fountain service.

When writing mention ELECTRICAL WHOLESALING

Coffee Maker and Portable Electric Stove—Leaflets No. 658 and 659, issued by the Hill-Shaw Company, Chicago, Illinois, describe and illustrate the company's Vaculator portable electric stove, designed specifically for homes, hotels, apartments, and restaurants; and the Vaculator coffee maker and electric hot plate.

When writing mention ELECTRICAL WHOLESALING

Coffee Makers and Steam Iron—A 16-page catalog graphically displays the line of coffee makers, parts and accessories, and heating units manufactured by the Silex Co., Hartford, Conn. The catalog also features the company's duoelectric iron that can be used with or without steam.

When writing mention ELECTRICAL WHOLESALING

. . . means better lighting at lower cost!

Fluor-O-Shields afford keener visibility — minimize stroboscopic effect, diffuse evenly and soften the light of fluorescent lamps. Fluor-O-Shields fit nearly all open-face fluorescent fixtures — 20W and 40W, single and multiple lamp units. Snap-on clips permit instant mounting. Made of lightweight aluminum, finished in white baked enamel. If your distributor does not stock, ask him to write us.

$1.95 40 watt 46⅞ in. $1.25 20 watt 22⅞ in.

SPECIFICATIONS

Cat. No.	Length	Fits Lamp	Units Per Pkg.
27-1-40	46⅞ in.	40 watt	12
27-5-40	22⅞ in.	20 watt	12

*Trade Mark — Patent Pending

FLUOR-O-SHIELD BY CAMFIELD MFG. COMPANY · GRAND HAVEN, MICH.

MODEL No. 46 Actual Size

New — MURDOCK BUZZERS and Push Buttons!

DEALERS everywhere report fast sales on these specialties . . . made by the Wm. J. Murdock Co., for 50 years a leader in communications equipment. MURDOCK'S No-contact Tone-right Buzzer attracts favorable attention because of its modern louver-design. Buzzer is fully insulated and produces a pleasing, uniform tone. It's guaranteed for years of trouble-free service. Choice of colors in attractive moulded cases. Operates on 6 to 8 volts, A.C. only. 3½" x 1⅝" x 1¼" deep.

No. 10

PUSH BUTTONS BUILT for SERVICE and SALES!

Model No. 10—A durable Push Button in attractive moulded case. Smooth working—positive contacts. Metal parts rustproof and insulated. 1⅝"x1⅛"x⅞" high. Name plate model No. 11 same construction as above, but has removable metal escutcheon. 3¼"x1⅛"x⅞".

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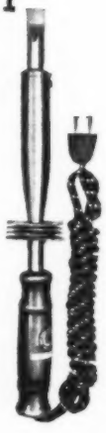
WM. J. MURDOCK CO.
235 Carter St., Chelsea 50, Mass.

It's a
SURE THING!
PROVED THROUGH THE YEARS FOR
RELIABILITY • UNIFORMITY
DEPENDABILITY

THE LENK LINE

of famous soldering irons and fine solders will keep retailer goodwill and create constant Profit. Available now in quantities to meet the post-war demand the Lenk line is a lively one—and the profits are as steady and dependable as the merchandise!



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Manufacturers of Soldering Equipment Since 1919

there is
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for GOOD communications and industrial wire. We are shipping you more and more of it now . . .

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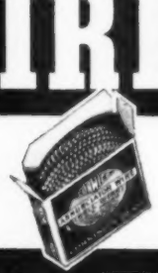

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"Made by Engineers for Engineers"

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Specialists in
SOLDERING
BRAZING
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6701 BRYN MAWR AVE.
CHICAGO 31, ILL.

TORK

TURN ANYTHING ELECTRICAL ON & OFF REGULARLY

The TORK CLOCK CO., Inc.
MOUNT VERNON, NEW YORK

Door Chimes—The A. E. Rittenhouse Co., Inc., Honeoye Falls, N. Y., has available a colorful brochure that illustrates the company's various types of door chime fixtures; a price sheet that includes description and list price of each model; and mechanism sheets that describe and illustrate the floating unit, rhythm master, and the volume control unit.

When writing mention ELECTRICAL WHOLESALING

Electric Counter Machine—A four-page bulletin contains application data on type MA electric counters that are used for recording operations of circuit breakers, switches, elevators, pumps and production machines where a count is desired. Royal Electric Mfg. Co., Chicago, Ill.

When writing mention ELECTRICAL WHOLESALING

Electric Fans—Catalog No. X-5549 illustrates and describes the line of electric fans manufactured by the Emerson Electric Co., St. Louis, Mo. This 28-page catalog gives design and construction specifications with performance data of the company's various types of desk fans, air circulators, ceiling fans, kitchen ventilators, exhaust and cooler fans.

When writing mention ELECTRICAL WHOLESALING

Electric Freezers—A four-page bulletin, published by the Loudon Sales Co., Minneapolis, Minn., describes and illustrates the company's home type and farm type electric freezers.

When writing mention ELECTRICAL WHOLESALING

Soldering Iron—The Hexacon Electric Co., Roselle Park, N. J., has recently published a bulletin, No. 141, that describes and illustrates the company's P-150 model soldering iron.

When writing mention ELECTRICAL WHOLESALING

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Fast selling, quality products, exclusive territory. Write to

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Wholesaler's Salesman
330 West 42nd St. New York 18, N. Y.

Electrical Fittings—A thirty-four page bulletin, No. 64, contains information on the line of Lock Tite pressure connectors manufactured by the Thomas & Betts Co., Inc., Elizabeth, N. J. It also includes installation photographs of typical applications of several of the company's items.

When writing mention ELECTRICAL WHOLESALING

Fluorescent Lamps—Basic principles and operating characteristics of fluorescent lamps and auxiliaries are explained in a 24-page booklet, No. A-4759, recently published by the Westinghouse Electric Corp., Bloomfield, N. J. The booklet describes the mercury vapor electric discharge tube, lists ratings of the various fluorescent lamps, and includes sketches and diagrams of the construction and functions of ballasts, starters and lampholders.

When writing mention ELECTRICAL WHOLESALING

Infra-Red Equipment—A folder, issued by the Miskella Infra-Red Co., Cleveland, Ohio, contains a dimensional sketch of the company's portable non-tip frame used in connection with banks of infra-red heating lamps.

When writing mention ELECTRICAL WHOLESALING

Lamps and Bulbs—A 16-page illustrated catalog and price list on incandescent and fluorescent lamps, cartridge and plug fuses, fluorescent starters, and flashlight batteries has been published by the Solar Electric Corp., Warren, Pa.

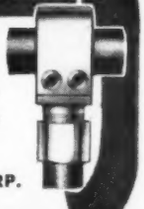
When writing mention ELECTRICAL WHOLESALING

Portable Soldering Unit—A folder, published by the Marion Electrical Instrument Co., Manchester, N. H., describes the portable bench-type induction soldering unit, designed for use wherever soldering of small metal parts and assemblies is part of the job.

When writing mention ELECTRICAL WHOLESALING

Conductor Fittings

Tees, Service Connectors, Lugs, Grounding Clamps, Straight and Parallel Connectors, Elbows, Cable Taps, etc., etc.



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NEW MARKETS with TRICO!

Reach lucrative new fields by handling quality-built TRICO Electrical Devices, Lubricating Equipment, and Leakproof Air Guns.

This famous line has been going to the market for more than *27 years* with that persistent and powerful selling force which accounts for today's broad demand.

Wholesalers everywhere are benefiting financially from TRICO'S progressive merchandising through . . .

- Numerous repeat sales.
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TRICO FUSE MFG. CO.
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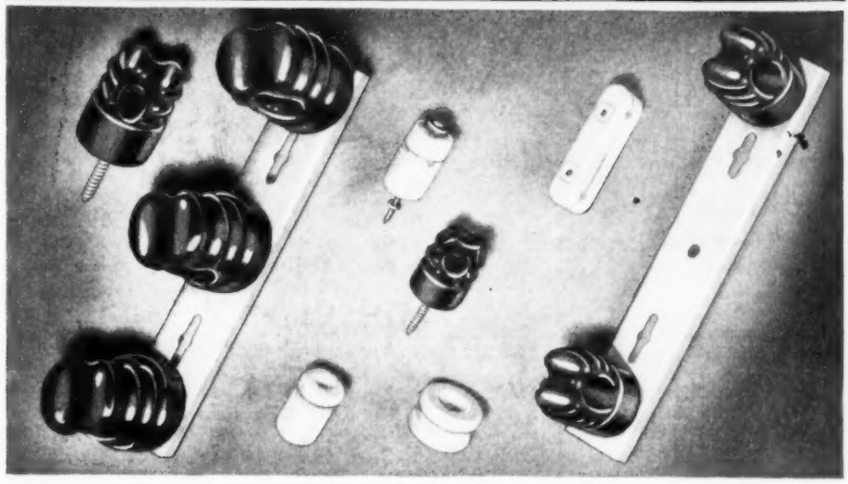

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1549 EAST FIRST ST. SANDUSKY, OHIO

It's GARCY for better lighting

Check the outstanding lighting installations of the country in stores, offices, hospitals, banks, factories — even subways—and you will come across GARCY lighting with amazing frequency. Specialized reflectors, strip lighting, troffers, ceiling fixtures, every GARCY item carefully designed and thoroughly engineered for maximum beauty, efficiency, utility. Catalogs available.

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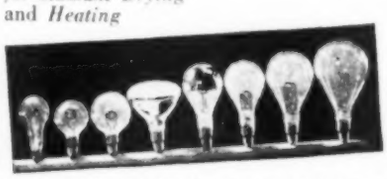
NALCO DRI-THERM INFRA-RED LAMPS
for Radiant Drying and Heating



Infra red radiant drying is one of the fastest moving branches of the electrical business today—and Nalco Dritherm Lamps are in great demand because they're dependable and they're advertised nationally—to your customers.
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No. 8
3/4 Inch
EXTRA ADHESIVE
SUPERIOR QUALITY
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EXTRA ADHESIVE
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CANTON, MASS

1896 – 1946

BUSS FUSETRONS
Hold Harmless Overloads—Prevent Needless Shutdowns without Sacrificing Protection

Fusetrons have a tremendous time-lag—far greater than ordinary fuses—due to combining a fuse and a thermal cutout.

Look how the time-lag of Fusetrons compares with that of ordinary fuses.

This great time-lag permits Fusetrons to hold motor starting currents or other harmless overloads and keep the circuit in operation instead of opening and causing useless shutdowns.

For Example: AC motors draw a current 3 to 9 times their rating for starting. This high starting current often causes ordinary fuses or other forms of protective devices to open.

(Chart shows 30 amp. 250 volt fuses. Other sizes and 600 volt types show similar results.)

Fusetrons have the capacity to absorb this high starting current without opening—even where the type of load causes the starting current to hang on.

Likewise, in normal operation, overloads often occur that are heavy but short lived—or light overloads hang on. They are harmless—yet they often cause fuses or other protective devices to open.

Fusetrons will hold such harmless overloads and keep the circuit in operation.

So with Fusetrons installed in mains, feeders and all branch circuits—shutdowns caused by needless opening of fuses or other forms of protective devices on motor starting currents or other harmless overloads are entirely wiped out.

70 to 100 Amp.

0 to 60 Amp.

Fusetrons have same dimensions as ordinary fuses and fit standard fuse holders. Sizes, 1/10 to 600 amp. in both 250 and 600 volt types.

Fusetrons give many kinds of protection, heretofore Not Available.—By installing them throughout the entire electrical system you can:—

- ★ Entirely wipe out needless blows caused by motor starting currents—or other harmless overloads. (see above)
- ★ Give Thermal Protection to panels and switches.
- ★ Prevent needless blows caused by heating in panels and switches
- ★ Use larger motor or add more motors on circuit WITHOUT installing larger switch or panel.
- ★ On new installations, use PROPER size switches and panels instead of Oversize.
- ★ Give DOUBLE protection to large motors.
- ★ Provide simplest way to stop burnouts from SINGLE PHASING.
- ★ Protect SMALL motors against burnout in a simple, inexpensive way.
- ★ Protect coils, solenoids and transformers against burnout.

ACT ON THE FACTS; even one needless shutdown—or one motor burnout—or one damaged panel may cost you more than replacing every fuse with a Fusetron. Don't risk such losses. Change to Fusetrons at once.

If you want further information to pass to other executives in your company, write for Bulletin FCS.

Bussmann Mfg. Co., University at Jefferson, St. Louis 7, Mo.
Division McGraw Electric Company

How you, too, can profit by reading the advertising BUSS directs to fuse users.

These advertisements have but one purpose—to make Fusetron sales more profitable. By reading them, you can pick out sales points that will help you with prospects.

Each month, BUSS messages emphasize one of the many kinds of protection Fusetrons give. The advertisement alongside is a briefed up one, but it still gets over a real message.

Notice that the emphasis is on time-lag, telling how it permits Fusetrons to hold harmless overloads and prevent useless shutdowns without sacrificing protection.

To complete the message, the advertisement lists many other kinds of protection Fusetrons give that are not available with any other protective device.

When you are selling Fusetrons, keep in mind the fact that they are ALL-purpose fuses. This will help you to put over the full story and close many a sale.

and don't forget your Assistant Salesman

Whenever you run across a problem in electrical protection that you might solve more easily with a little help—don't forget the BUSS Fuseman in your territory. He has at his command a library on electrical protection and an engineering staff at headquarters—and he is always ready and willing to help you.

BUSS FUSETRONS